THE DENTAL DIGEST

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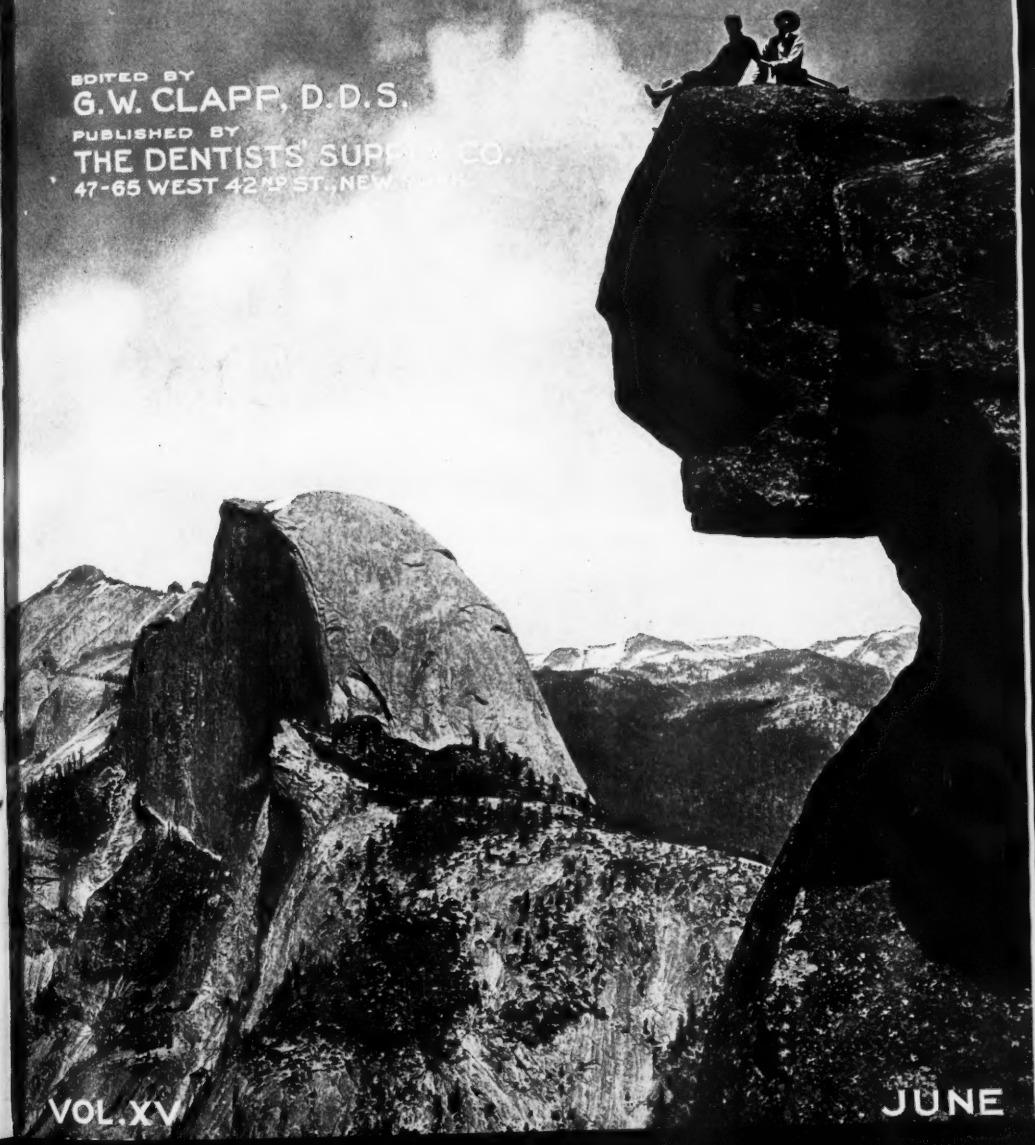
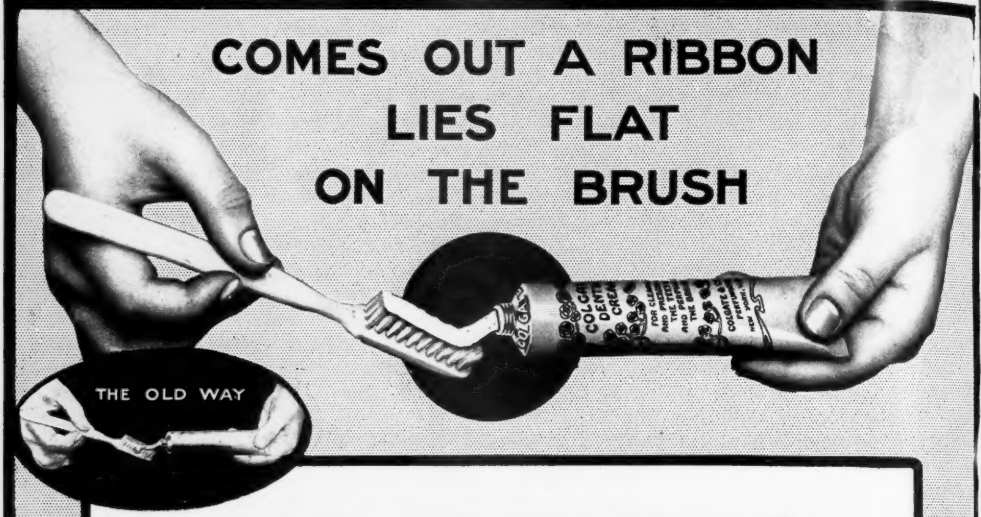


VOL. XV

JUNE



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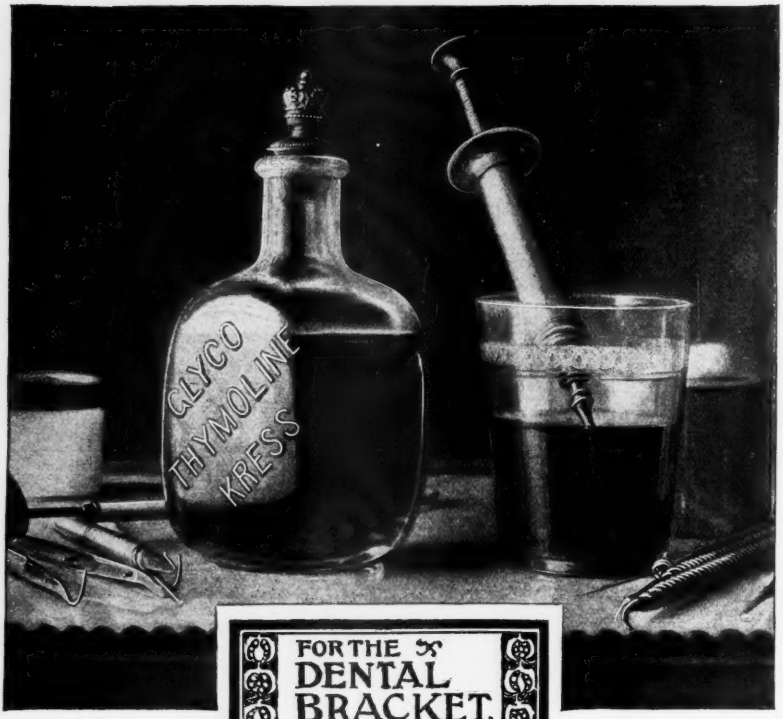
A CALIFORNIA NUMBER

Our cover this month is from a photograph of one of California's scenic wonders. We publish also the photographs of the officers of The Southern California Dental Association and of the Chairmen of Committees, so far as received; also the photographs of the officers of The California State Dental Association.

CONTENTS FOR JUNE, 1909

GLYCO-THYMOLINE



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THE DENTAL DIGEST

GEORGE W. CLAPP, D.D.S., Editor

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THE CASTING PROCESS AS APPLIED TO GOLD INLAYS AND OTHER DENTAL USES

(Continued from May Number)

J. G. LANE, D.D.S., PHILADELPHIA, PA.

THE pattern for a gold inlay should be made in the cavity that is to receive the finished casting. This insures a better adaptation than can be had by any method thus far devised for making the pattern in a model. In the former method we have three transfers: cavity to pattern, pattern to investment and investment to gold. In the latter we have five transfers: cavity to impression, impression to model, model to pattern, pattern to investment and investment to gold; or if the casting is done directly in the model we still have four transfers by the latter method. In any transfer we can scarcely avoid losing detail and definition; therefore, the fewer the transfers the better. Furthermore, there is vastly more possibility of distortion in an impression than in a pattern. This can easily be understood when we consider that the pattern is adapted to the interior of the cavity only; while an impression for a model is adapted not only to the interior of the cavity but

also to the exterior of the tooth—as well as to adjoining teeth. Removal of such an impression from the tooth or teeth is almost sure to distort it, nor is there by this method any possibility of determining whether distortion is present or not until the inlay is made. By the direct pattern method there is very little possibility of distortion, or if there is a suspicion that distortion is present it can easily be discovered and corrected before proceeding further.

There may be had quite a variety of waxes intended for patterns for gold inlays. This variety includes many colors and densities. There is little need of variety in color. This should be such as would give the greatest possible contrast between it and the shade of the tooth, so that in finishing the pattern's margins the slightest overlap could easily be detected. Dark brown seems to give the greatest contrast. It might seem that black would be the most suitable color, but this is not the case. Green is less desirable than black, and light blue less than green. In every case the coloring material must be a vegetable product, so that no residue will be left after the wax has been burned from the mould. Pattern wax of a given density is not suitable for all cases. Some cavities or operations are such that some little time will be necessary to get the wax into position and adapted to the interior of the cavity. In others it can be adapted in a moment. This much of the operation must be done while the wax is soft. Very hard waxes will not remain plastic many seconds; and unless these few seconds are sufficient to make the adaptation to the interior of the cavity and get the bite (if such be needed), a softer wax should be used. In any case, the wax should be as hard as can be properly used, but should not be so hard that the fractures that occur in the surplus that has squeezed out will reach deep enough to involve what will finally be the finished pattern. The harder the wax the less liability of distorting the pattern in removing it from the cavity and flasking it. With increased dexterity and skill a harder wax can be used.

Very hard wax may be warmed in hot water to soften it—at least this method is advisable until the operator has become familiar with the peculiarities and manipulation of the same. After this stage has been reached it becomes a question whether the time consumed by this method will not decidedly overbalance the advantages.

The wax can best be pressed into a cavity by a finger or thumb; and in many large approximal operations a finger and thumb of the other hand can at the same time prevent it from squeezing out very much at the sides. Thus partially confined, a better adaptation to the interior of the cavity is possible. Having the wax thus pressed into the cavity

and the bite taken, the surplus is carefully cut away with slightly warmed instruments until the cavity margins have been reached. Instruments that are suitable for shaping plastic fillings answer nicely for this work. In filling an approximal cavity a proper contour must be made to preserve a normal interdental space. In the beginning, the wax is banked tightly against the adjoining tooth; to get clearance without unnecessary loss of contour pass a very thin (.003″) ribbon saw between the wax and the adjoining tooth. While the saw is in this position spring its ends against the wax to make the latter very slightly rounded. In some operations a general smoothing effect may be gotten by using the cloth side of a very thin finishing strip. This, however, is likely to injure the contour unless care is exercised; or it may lift the pattern partly out of the cavity without our knowledge, and thus produce a false edge. As stated in our article on cavity preparation, a margin should everywhere be accessible to burnishers, and by these instruments the final adaptation to the cavity margins should be made by burnishing lightly over all the edges of the pattern.

The use of a matrix in making wax patterns is not advisable. Its presence and removal are likely to interfere with the proper amount of contour. It is usually in the way in taking the bite, and unless it can be adapted very loosely is almost certain to prevent the wax from reaching the extreme margin of the cavity where covered by it. If it is loose enough to allow the wax to reach the margins it has not done very much shaping—which, after all, has to be done by some other means. The surest plan is to cut for shape and burnish for margins. No overlap should be allowed to remain. If the inlay overlaps, it is the overlapping part that receives the burnishing immediately after cementation. This burnished overlap would be removed in finishing, and thus what would be the final margin of the inlay would not have been burnished at all, and in all probability a cement line would show. As the cement line is the weakest point in any inlay operation, all consideration should be given toward reducing it at the surface to the smallest minimum possible. A polish may be given to wax by going lightly over its surface with a tuft of cotton that has been dipped in vaseline.

Whenever it is possible to do so, insert the sprue wire into the pattern while the latter is still in the cavity. Unfortunately, this cannot often be done. As stated elsewhere, the majority of gold inlay operations are in compound cavities in the masticating teeth, and in such the sprue wire can be most advantageously placed in the most prominent point in the contour of the approximal surface; and this point cannot be reached by the sprue wire until the pattern has been removed from

the cavity. When the sprue wire cannot be inserted before removal of the pattern, the latter may be removed from the cavity by means of a curved explorer that has a very small portion of its point burned at a right angle either to the right or left (S. S. W. Stock Patterns, Nos. 9 and 10). These can be given a movement as if in search of a cavity at the point of contact, forced into the wax at the point where we wish to insert the sprue wire, and the pattern lifted out of the cavity. In an occasional case, where insufficient separation is present, a little yellow beeswax may be added to the pattern to produce more contour, and while the inlay is being made separation may be gained. Adding wax to a pattern is always a questionable proceeding, and should be resorted to only when no other procedure seems to be advisable or possible. If on the removal of a pattern it is found that some part of it is imperfect and a little more wax needed add yellow beeswax; this becomes plastic at a lower temperature than inlay wax and is less likely to destroy or injure the part that is right. Place again in the cavity and readapt it. This also is a questionable proceeding, and it is better to start anew—profiting by the mistake in the former attempt.

In any operation of pattern-making, the surface against which the pattern is fitted must either be wet or oiled (preferably wet) to prevent adhesion of the wax.

The pattern is placed upon a cloth; and without handling it the sprue pin is warmed and inserted. The latter must always be inserted in some place on the pattern that does not require an absolutely definite shape of surface and where its mark can be most easily finished off, or placed in such position in approximal surfaces that in finishing a little material may thus be added to the point of contact and make up for the thickness of the ribbon saw used in pattern making. In some instances it may, for special reasons, be advantageously placed on the cavity side of the pattern.

If the pattern is to be sent away to a laboratory it should be placed in a small vial of water to prevent injury while being carried.

Having the pattern made and mounted on the sprue pin, the next step is investment. An investment must possess certain fundamental requisites: it must neither expand nor contract permanently under the high heat to which it must be subjected; must be fine-grained enough to impart a smooth surface to the casting; must be sufficiently porous to allow passage of gases (air, steam, nitrous oxide, or whatever); must be able to withstand the breaking strain to which it is subjected in casting; and on the surface must leave no residue that would be difficult to remove.

Some eighteen months ago we conducted a series of experiments

with the view of determining the relative merit of various ingredients and their combinations for an investment material that would be most suitable for the work in question. The materials used in these experiments were silex, pumice, pulverized fire-brick, powdered asbestos, kaolin, and plaster. These were tried in many combinations and proportions, and micrometer measurements taken to test results. In this article it is needless to enlarge upon the nature of the experiments further than has been mentioned, or to give results of individual tests. Suffice it to say, that a mixture of cast plaster one part, and finely powdered silex three parts (by weight), excelled all other combinations tried in at least two salient points; namely, size of casting as compared to size of pattern, and smoothness of surface. In this investment we have made castings from patterns with a measurement of one-half inch (.5000″) that showed only loss by shrinkage .0006″. One commercial investment showed a test nearly as high—with a shrinkage of .0009″ from a pattern of .5000″. Others fell as low as .0043″ loss from a pattern of .5000″. (We might digress for a moment to state that in a series of tests on the " shrinkage problem " which are now almost completed, we have proven to our satisfaction that one of the two chief things concerned in reduction of shrinkage is the investment material.)

Investment material should be mixed as thick as can be used. The same conditions obtain in this as in mixing plaster; namely, a harder finished product if mixed thick. It also has the additional advantage of reducing the tendency to "burn smaller " when heated. As stated before, an investment should not contract with the addition of heat; it should, however, expand in heating as much as the flask expands. In mixing, add the investment material slowly, allowing it to settle without stirring until all has been added that the water will take. Toward the last it will be found necessary to add a little here and there —wherever a little pool of water remains—until the bowl can be quickly inverted and held in that position without loss of any of its contents. A few brief movements of a spatula will then put the mixture into proper consistence for use. The batter thus made may be added to the pattern either with a very small spatula (preferably a porcelain carving instrument) or with a camel's-hair brush. Start by adding at some one point, and by sort of chasing it along and adding more, the whole is quickly covered. Each addition except the first is made to some part already covered, and is afterward pushed along into place. This is to prevent enclosing air bubbles next to the pattern, which on the casting would be represented by so many little nodules of gold. Dipping the pattern into water immediately before applying the investment material slightly decreases the tendency to air bells; but this

same procedure is likely to injure the strength of the investment at its most important point by thus getting too much water in this part of it. If oil or vaseline has been used in the operation of pattern making, all traces of such should be removed from the pattern after it has been mounted on the sprue pin, by means of a camel's-hair brush, water, and soap; for the possibility of air bells in investing is greatly increased if oil or grease of any kind is present. By all means the safer plan is to proceed with a suitable instrument, as first mentioned, and watch carefully to prevent bubbles.

Having the pattern thus covered to quite a little depth all over, the remainder of the operation may be done with the same mixture of investment and in whatever manner the flask will best allow. With the Taggart flask this would be done by placing the ring against the lid, in which is mounted this sprue pin with its pattern already covered, and quickly filling it from the bottom. With the Jameson, the little cup-like flask would be filled, and the covered pattern with its funnel-forming device would be inserted into the soft mass from the top. With flasks that have no lid, or no special crucible-forming device, the flask would be placed right end up, filled with investment, and the covered pattern thrust into it—using the extended sprue wire as a handle—until the proper depth had been reached. The crucible would afterward be made by cutting away the investment.

It is wise to let invested cases stand a few hours before applying heat, if the operation does not have to be completed at one sitting. This gives the mixture time to set, and the water to evaporate of its own accord. By this procedure the mould stands less liability of injury from heating. If it is necessary to cast at once, the operation could be hastened by having all the investment material, except that immediately next the pattern, composed of the old-time familiar and faithful mixture of plaster and sand. This will allow heating earlier and with greater rapidity. In any event there must not be enough heat applied to drive water from the investment, or to generate enough steam to explode it. When there is no longer any moisture present, the heat should be applied as rapidly as possible and continued until any and all remaining wax has been carbonized and the carbon thus produced burned out. Oftentimes a little candle-like flame burns out of the sprue opening—indicating that the carbon is burning out. The completed stage of heating can be readily determined by the absolute absence of any dark halo of carbon about the sprue opening; before this condition is reached the flask and investment have been heated to a dull red heat.

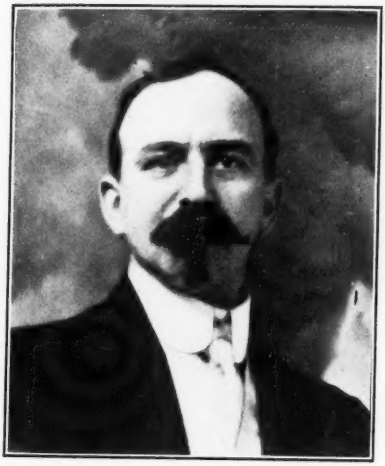
The next process is making the casting.

(*Continued in the July issue*)

A SHORT HISTORY OF THE SOUTHERN CALIFORNIA DENTAL ASSOCIATION

(Now 12 years old, with a membership of 325)

By Garrett Newkirk, D.D.S., Los Angeles, Cal.



J. E. McMillan, D.D.S., First Vice-President.*

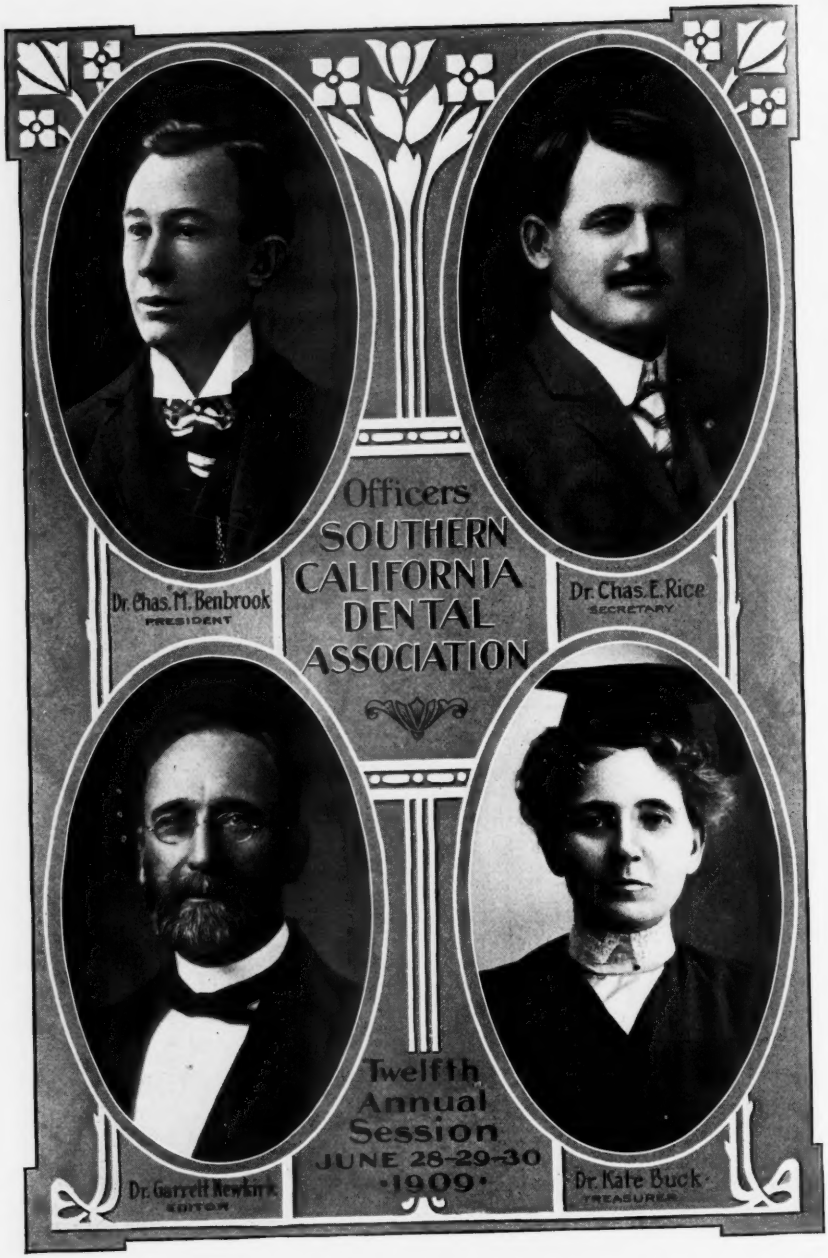
If any part of the United States of America might be excused for having the provincial spirit, for geographical and climatic reasons, it would be Southern California. It is in the extreme southwest corner of our country. It is separated from the east by mountain ranges and a long stretch of semi-desert lands. It is divided from Northern California by other mountain chains, but recently pierced by the tunnels of the Southern Pacific Railroad, and by virtue of these mountain ranges east and north, and the mild Pacific stretched along its borders south and west, Southern California has conditions of climate found nowhere else upon the American Continent.

And yet it is a sort of paradox to state that Southern California has *less* reason than any other part of the country for having the provincial feeling, because its population has been drawn from all the other States and territories, and foreign lands as well. There is every reason, therefore, that the spirit of the people should be in a very large sense cosmopolitan—and this is true.

And we may say also that the spirit of Southern California is most distinctively American, because there are fewer foreigners here to be assimilated than in most parts of the United States.

We have representatives here from every other State and territory, and Canada as well. From Maine to Texas, and from Dakota to the Gulf, people of the best classes have come to mingle with our new citizenship. Many of these organize social "State" societies to perpetuate home memories and to greet occasionally their good old neigh-

* Dr. McMillan's picture was unintentionally omitted from the plate on page 442.



The photograph of Dr. J. E. McMillan, First Vice-President, will be found on p. 411.

bors from the east. So there are "Maine," "Vermont," "Illinois," "Iowa" societies, and many more.

Now all this is favorable to the development of a good spirit among professional men—legal, educational, ministerial, medical or dental. Nowhere in the world can there be found more active, influential or harmonious associations than in Southern California. There is a disposition to "get together" and to pull together; for all this means progress and professional advancement. And because of the fine type of Americanism before mentioned the average professional talent is of high order.

In Pasadena, for example, a city of thirty thousand people, there is a medical society that for the ability and influence of its members would compare favorably with any similar association in an eastern city of a hundred thousand or more. And the Pasadena society is but a branch of the Greater Los Angeles Association. Not long since, at a dinner given to honor an efficient health officer of Los Angeles, about five hundred physicians were present. The writer has never seen such a large body of representative men assembled outside of a national meeting.

That the dentists of Southern California have not been lacking in true professional spirit is shown by the rapid growth and harmonious work of its central society. The writer believes that the development of this association could hardly be paralleled in the history of dentistry anywhere.

In December of 1897 the Odontological Society of Los Angeles appointed a committee consisting of Drs. E. L. Townsend, J. C. McCoy and J. D. Moody to meet a similar committee of the Los Angeles Society of Dental Alumni, for the organization of a society for the whole of Southern California. The Committee of the L. A. D. A. Society consisted of Drs. S. H. Tolhurst, F. R. Cunningham and E. G. Howard. By the efforts of this joint committee of six an organization was perfected in July, 1898.

In October following the first regular meeting was held at San Diego. Dr. W. A. Smith of Los Angeles was the first president, Dr. L. E. Ford of Los Angeles the first secretary.

Since the organization five meetings have been held in Los Angeles, two in San Diego, two in Santa Barbara, one in Riverside.

The presidents have been Drs. W. A. Smith, H. R. Harbison, A. H. Palmer, E. G. Howard, J. M. White, L. E. Ford, E. L. Townsend, J. D. Moody, W. H. Spinks, J. F. Cook and C. M. Benbrook. Dr. L. E. Ford was secretary from 1898 to 1903. Dr. C. M. Benbrook, 1904 to 1908, and Dr. C. E. Rice is the present incumbent.

It is but fair to state that while many might be praised for efficient service, special mention is due to the first secretary, whose unflagging industry, efficiency and tact were invaluable. His successors in office have also been most faithful and efficient.

In 1906 a movement was inaugurated to reorganize the profession of Southern California on the "Illinois" plan. This part of our history will be presented by the man who has done the largest part of this successful work, Dr. Wm. Bebb.

Suffice for me to say that by this system of reorganization the profession has been remarkably solidified. This solidarity gives power—power for good—greater influence with legislators and administrative officials, and adds strength to the Board of Examiners in their efforts to uphold the law.

REORGANIZATION OF THE SOUTHERN CALIFORNIA DENTAL ASSOCIATION

William Bebb, D.D.S., Los Angeles, Cal.

The success of this Association from its inception to the present day is best explained by the one word, harmony; for not once has there been any dissension, but, on the contrary, every member of the Association has worked continuously for the good of the organization.

That this is true is due largely to the wisdom and energy of the members who laid the foundations for the society as it now exists. Their main object, apparently, being to build up a society where good fellowship should come first, last and all of the time.

With this foundation to work from, it was not a difficult task to induce the counties outside of Los Angeles to consider organization of component societies which would be auxiliary to the central organization.

With the aid of Dr. Arthur Black, and following the plan of the Illinois Society, the Los Angeles County Society was reorganized, San Diego County following, and Riverside, Imperial and San Bernardino counties organizing a new society. Pasadena has since formed a branch of the Los Angeles County Society.

A uniform set of by-laws and constitution were adopted by all of the competent societies and the central association changed theirs to meet the new conditions.

The plan has been in operation for too short a period to make any definite predictions; suffice to say that the membership has been increased and interest in the outside societies stimulated. At the present


Chairmen of Committees
Southern California Dental Association

time the membership, in proportion to the number of practitioners, is greater than that of any of the State organizations on the coast, and the attendance and enthusiasm evinced at our meetings are worthy of note.

The enthusiasm which induces men to drop their work and travel several hundred miles to attend meetings, as do some of our members, is the asset which is going to carry forward the work and make this society an important factor in the not far distant National Dental Association formed upon the component society plan.

For the benefit of some of our Eastern friends it would be well for them to know that San Bernardino County has an area of 19,947 square miles, greater than several of the New England States, and we have one member at the extreme eastern border of this county.

The following first letter is but slightly modified from the one sent out by the Illinois society, and because of its concise and terse language and for the reason that it is one of the greatest aids to reorganization, it is here reproduced:

The Southern California Dental Association at its last annual meeting adopted resolutions in order to effect a reorganization which contemplates a closer affiliation of all of the ethical members of the profession of Southern California, by which it hopes to assist the organization of new local societies, all of which shall work together for the good of the profession.

At the time of the meeting of the National Dental Association last June a committee was appointed to engage in the active work of reorganizing the various States along lines similar to the American Medical Association—*i.e.*, a central national society with component State and county societies. Illinois is already organized; Iowa, Missouri, Wisconsin and Michigan have taken up the work, and fifteen other States have the plan under consideration, and we of California, of Southern California, must be up and doing if we are to maintain our reputation of being in the front ranks of society progress.

The time has arrived when the members of the dental profession must be better organized if they wish to accomplish those things which are necessary for advancement. We must be able to work systematically and work together if we expect to progress.

It is proposed to organize here in Southern California a dental society which will be a power in the State in all matters in which the public welfare is involved from a dental standpoint, in matters of illegal practice of dentistry, in matters of unethical practice, in matters of professional advancement in all lines, in the furtherance of good fellowship among dentists, in fact in all matters of interest to the dentist in his home town and in the State.

The plan is to organize local societies in every county in Southern California. The constitution prepared for these local societies provides that every reputable and legally registered dentist shall be eligible to membership. Some of the societies will meet monthly, some every two or three months and some only two or three times a year, according to local conditions. The Southern California Dental Association proposes to accept all of the members of the local society into full membership, and it will accept none who are not members of local societies (except temporarily from those counties in which local societies are not organized). Thus, as each society is organized, the Southern California Dental Association recognizes the county society

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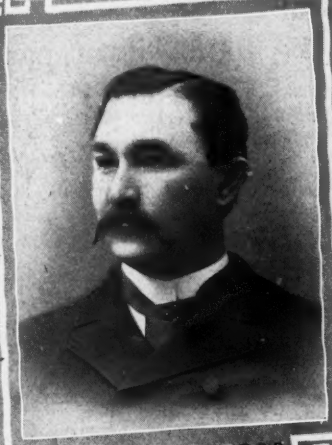


Thomas N. Iglehart, D. D. S.
TREASURER

ANNUAL MEETING
SAN FRANCISCO
JULY 6-7-8, 1909

as its representative in that county, and a practitioner can become a member of the Southern California Dental Association by being elected a member of the county society. By this plan the men of each county organization pass on the qualifications of the applicants to both their own and the Southern California Dental Association, and if any man is dropped from membership by his county society he is at the same time dropped from the Southern California Dental Association. Each member of the county society will pay dues, covering membership of both the county and the Southern California Dental Association, to the treasurer of the county society, and he will forward to the treasurer of the Southern California Dental Association the latter's share of the same.

By such an organization it will be readily seen that we will be able to combine the full strength of every dental society in behalf of any measure for the good of the profession, and we should be able to accomplish many things that could hardly be attempted under present conditions.

The Southern California Dental Association does enough good along general lines to entitle it to the support of every ethical dentist, and each member of the profession receives enough benefit to pay him for belonging, even though he never attended a meeting.

Those who are now members will receive greater benefit by a greater society and the new members will gain in every way. The advantage of being able to attend the spring meeting, which will be the greatest dental event ever held on this coast, is no small inducement to others to join.

THE CALIFORNIA STATE DENTAL ASSOCIATION

O. P. Roller, D.D.S., Los Angeles, Cal.

The California State Dental Association was organized in 1870.

Practitioners of national reputation from Eastern States are often guests of the association.

The session of 1909 will be a union meeting with the Alumni Association, Dental Department, University of California.

Dr. John Q. Byram of Indiana, Dr. Weston A. Price of Ohio and others are to clinic and read papers before the association at this session.

Clinics to the number of one hundred (100) are expected to be given.

An attendance of fully five hundred (500) is expected.

The meetings of the California State Dental Association are eagerly looked forward to by the members, who number about three hundred and fifty (350).

The records show that this association has had upon its roll many of the leaders of dentistry in the State since its organization forty (40) years ago.

At this session it is expected that at least one hundred (100) new members will join.

At the 1908 session new By-laws were adopted, one important

feature being, "Any ethical practitioners making application for membership within a period of one year of the time of his becoming a licentiate in this State shall be admitted *without* the payment of the usual initiation fee, five ($5.00) dollars." The object of this being to extend the hand of good fellowship to new comers to our State, and particularly to encourage young graduates to affiliate with their State association.

Dues are five ($5.00) dollars per year.

All ethical practitioners of dental surgery in California are cordially invited to become members of this association.

The officers consist of: President, O. P. Roller, D. D. S., 221½ S. Spring St., Los Angeles; Vice-President, H. L. Seager, D. D. S., 1361 Valencia St., San Francisco; Secretary, C. E. Post, D. D. S., Schreve Building, San Francisco, and Treasurer, Thos. N. Iglehart, 1720 Baker St., San Francisco. The term of holding office is one year, or until their successor shall have been elected. An executive council of ten members, which includes the officers above mentioned, has the management of the association.

PRESIDENT'S ADDRESS*

EDWARD G. LINK, D.D.S., ROCHESTER, N. Y.

ANOTHER year of the Seventh District Dental Society closes with this meeting. At its beginning you made me president, which office was accepted very reluctantly. The honor conferred is now fully appreciated. Your hearty support has transformed duty into privilege and made work a pleasure.

The work of the year has brought its incidents and lessons, from which the foregoing is gleaned.

Since its organization the members have shown their ability to conduct its meetings in a creditable manner, and the harmony and good fellowship that has prevailed is commendable. A few have attended regularly the State and adjacent District Society meetings, and quite a number have done special self-denying work in arranging for its meetings, and their efforts have received the approval and co-operation of the other members.

A society with such a membership is capable of meeting new conditions, which certainly are arising, making progress in advance of the past.

* Read at the meeting of the Seventh District Dental Society, Rochester, N. Y., April, 1909.

A few changes, however, are essential.

Better business methods should be adopted.

Prompt payment of dues should be insisted upon and the finances carefully managed. Needless expenditures should be avoided; but to make this society what it should be means the outlay of more time and money than has in the past been expended.

Conditions are changing, and with them come increasing demands and privileges. To meet and enjoy them means work and money.

The Dental Society is connected directly with our life work; should we not be willing to expend enough to make it the best organization we are affiliated with? We should stimulate scientific research and good fellowship. To do this means increase of the dues sufficient to establish a reserve fund from which we can draw as necessities arise. Recommendation is made that the annual dues be raised to four dollars. This is a matter that should be carefully considered at this meeting.

The membership should be largely increased. There are many reputable dentists within the district who should be identified with this body. The present membership committee are to be commended, inasmuch as through their efforts we have a larger number of applications than has been presented at any previous meeting. This should stimulate future committees in their work, in which every member of the society should feel it his duty to take an active part.

The By-laws make it the plain duty of the Corresponding Secretary to procure and maintain a complete and classified list of all the dentists in the district; to furnish the Recording Secretary with a copy of the same; also forward a copy to Secretary of the State Society—this to be revised from time to time as changes may occur.

All districts of the State should be requested to concur in this, that a complete and classified list of all dentists in the State be made available, which would furnish an invaluable aid to the secretaries and business committees of the State and District Societies.

The relationship of our own and adjacent District Societies should be mutual; good fellowship should be encouraged. Interchange is essential to infuse new life into each. We ask of, and receive from, the others valuable aid to our meetings. Do we give as much? Stop and think for a moment. At some of the Union meetings held in other districts our society has not responded, either with help or the presence of any, except two or three members. Let us ask ourselves, is this ethical? We should give if we expect to receive. The State Society also demands our support. A plea is made for a large representation, especially at the coming meeting in May; we claim its President as

one of our number who has our interests at heart, let us give him the cheer and support of a large attendance.

The By-laws Revision Committee have recommended two changes in particular which are considered important. One provides for a nominating committee whose duty it shall be to consider carefully nominees for the offices, thus securing the best possible adjustment of the Societies' management.

The other provides for a Board of Directors, to consist of the officers (four in number) and five other members, one elected each year to serve for a term of five years, to have general supervision over the affairs of the Society, which would give more stability and permanency to its proceedings.

Committees should be appointed with their consent and upon expressed willingness to perform the duties allotted them.

The Reception and Entertainment Committee should *express* to our guests the welcome and good fellowship we *feel,* and extend to them such entertainment as may be deemed proper.

An important factor in our profession is the manufacturers and dealers in dental supplies. Their exhibits at our meetings are both educational and interesting. Let us demonstrate true and broad ethics by extending to them the courtesy they deserve and which in the past they have extended to us.

Finally, let us plan carefully and work harmoniously and diligently, remembering what has been well said: "The only thing that is permanent is progress."

THE WAY I DO A FEW THINGS

JAMES H. BEEBEE, D.D.S., ROCHESTER, N. Y.*

One night after working all day at his chair
The dentist lay sleeping, oblivious of care,
And snored and puffed in his well-earned sleep.
But anon he aroused from that slumber so deep,
And in thoughts went back to the days of his youth.
As he turned on his side and twisted, forsooth
He was dreaming and living in times that are past—
Of troubles and trials and pleasures that last;
Of difficult things that with skill he o'ercame;
Of squabbles with patients he remembered by name—
The smiles and the joys, the frowns and the tears
He had seen and had heard during professional years.
His modes of procedure he called up before him;
Some he viewed with delight, and some they did bore him.

* Read at the meeting of the Seventh District Dental Society, Rochester, N. Y., April, 1909.

He dreamed of the time when he first hung his sign,
When he had to look sharp or he'd surely not dine
On the fat of the land, but on crackers and cheese,
On taters sans butter and such things as these;
And then his great heart went out to the young.
He talked in his sleep, and his valuable tongue
Mumbled words of advice to the boys coming up.
For he knew of their troubles, how bitter the cup.
His noble old heart opened up as he thought
Of some of the foibles the youngsters are taught
By those who ride hobbies and teach in our schools.
We hear of the teachings, and think that the fools
Are not all of them dead, though maybe 'tis true
That we are the dunces, and, professors, not you.
And so as he dreamed and mumbled in sleep,
His thoughts took shape, and in order to keep
Them intangible, the pen on the table
Wrote them down, and it surely was able
To keep pace, for the speed of our friend it was slow,
You'll find them traced out in the words formed below.

THE majority of themes presented at meetings of this character are on subjects pertaining to the higher branches of our profession—even dipping more or less into medicine and surgery. I believe all that there is to be learned in what we may term the laboratory department is not yet fully exploited.

This article will have more to do, therefore, with the mechanical branches. It has been compiled as matters come up in daily practice. It gives results rather than processes.

Commencing at the beginning: I prefer home-made wax for several reasons. The wax we buy prepared at the dental depots is undoubtedly pure wax, but it is far inferior in working quality to that which is composed of four parts of white wax (bleached) to one of paraffine, and the more times the latter is remelted and used the better it is.

Should this mixture be a little hard add a teaspoonful of sperm oil to the pound. In preparing this wax use a slab of plaster about one-quarter inch thick, wet in cold water. To make this slab, stretch a piece of dam on a board, and on this dam construct a rectangle the size desired. This should be made of pieces of wood one-quarter inch thick and all nail or brad heads driven out of sight. Pour in the plaster as free from bubbles as possible and stroke it with a straight edge, allowing the straight edge to rest on the wood that forms the rectangle. When hard, remove the plaster from the board. When thoroughly hard, wet with water and dip in the melted wax. Drag the slab on one edge and the end to take away surplus wax and place in cold water. The wax sheet thus formed will clean beautifully from the slab.

Repeated dipping will give greater thickness to the sheet.

IMPRESSIONS, UPPER

All of the trays I possess for upper impressions have a hole in the palatine surface to allow an instrument to be passed up to the hard palate after the impression has hardened, thereby allowing air to enter and easing the removal of the impression.

In taking the impression for full upper dentures, first warm the impression tray so that wax will fasten itself to it. Then a mass of wax is warmed—placed in the tray and forced against the roof of the mouth. This is removed and enlarged somewhat, and the surface scored so that plaster will adhere to it. It is then cooled.

Plaster of proper consistency is placed now on the wax impression cup thus formed, and a small mass of plaster, taken upon the first two fingers of the left hand, is plastered in the roof of the mouth and the tray loaded with the plaster put in the mouth and its heel pressed to the roof at the rear (this to prevent flooding the throat with plaster); then bring up the toe of the tray forcing the plaster forward. Raise the lips to insure the escape of air that will cause bubbles. As soon as the plaster is hardened sufficiently, pass a pointed instrument through the hole before mentioned and request the patient to inform you of a pricking sensation in the roof. Then remove the impression.

Varnish with sandarac varnish colored with eosine (one of the aniline products) very thin. As soon as a gloss is formed, plunge into water. Mix the plaster for the cast to a creamy consistency, and having removed the impressions from the water, pour in the plaster. The first lot of plaster should be immediately poured out and again refilled till a thin film of plaster coats the entire surface of the impression, and then the mass should be put in. This is done to insure absence of bubbles and consequent roughness of the palatine surface of the finished plate.

When the cast is hard the tray is warmed and removed. Then the wax is removed and the plaster of the impression is found to be very thin and is easily broken off.

In mixing plaster for impressions, I prefer salt as a quickening agent, for the reason that it is cheap, easily obtained, is not distasteful to the patient, and, above all, makes the plaster very weak, so that it is more easily fractured and removed from the cast.

Notwithstanding the instructions of our good friend Dr. Haskell, I always cut a slight groove in the cast along a line where I wish to limit the edges of the plate.

I also take an impression in wax of the lower jaw, from which I make a cast.

A bite plate is now made and the wax ridge fastened to it and put into the mouth.

The crucial moment has arrived; we all know the tendency of our patients to make pug dogs of themselves and insist that they are shutting their mouths correctly when they could not for the life of them say "gee."

This can usually be avoided by having the patient sit forward, throwing the head back as far as possible, holding the wax plate with the tongue at the rear, to the roof of the mouth and then closing the jaws. Try it.

Of course at this stage the length of the bite, the centre of the mouth and its horizontal line should be determined—these last can be marked on the wax bite.

The case is now placed in the articulator, the lower cast being placed in position in the indentations made in the bite. Before placing in articulator, varnish the reverse side of the cast to facilitate removal from the articulator. In articulating never under any circumstances allow the anterior teeth to strike the lowers, the uppers should just clear the lowers.

I use entirely the combination sets. Those with the posterior eight diatoric; and I will say that I never have had one break or loosen. When using these teeth see to it that the transverse holes are filled with wax and that wax is between the teeth.

The reason of this will be seen later.

When the wax and teeth are in place, smooth the surface of the wax by short jets of flame from the blow-pipe. The wax will undoubtedly be found in objectionable positions around the teeth. This can be easily removed by a chisel-shaped tool made of orange or hickory wood, the point of which from time to time is moistened with saliva. It is surprising how perfectly this simple tool will do its work.

Have the case waxed and smooth and well healed at its edges to the cast. Varnish surface of the wax with sandarac to insure ease in removing wax from the mould; when hard enough, plunge into cold water.

Wet the lower part of the flask and put in some plaster and then the case, being sure not to lower it further than the gum line—leave all of the gum portion of the plate to be formed by the top or cope of the flask.

When the plaster around the model has hardened, varnish it with sandarac and put on the ring. Now place the case in water while mixing the plaster for the cope. This placing in cold water is for the purpose of preventing the occurrence of bubbles, the presence of which is almost a fatal condition in this mode of procedure.

Before separating the halves of the flask warm it, then open it and remove the wax. For washing out the wax I use a tool which I call a suck squirt. The case is placed in boiling water and the suck squirt is used. It is nothing more than a large blow-pipe, with an abnormally large bulb. The hot water is drawn by the mouth into the bulb, and the point being trained on the wax, by blowing, the water is expelled and forced into all the little recesses which are not otherwise easily reached, and the wax washed out.

As soon as the case has been removed from the hot water and becomes dry, which will take but a moment, varnish the cast with a solution of silicate of soda or water glass and allow to dry. Air chamber or relief plates should be about one-sixty-fourth of an inch thick only and cover all the hard parts of the mouth.

In gating for the overflow of rubber, make gate in the rear of the plate only, by cutting a large space in the lower part and scraping a broad flat gate on the upper part, not more than the thickness of a piece of paper. In closing, always bring the toe of the flask down first and gradually the heel, thus forcing the rubber back toward the gate and preventing the displacement of the pink rubber. In packing the pink rubber always see to it that it is packed smoothly. You will remember that I cautioned you against bubbles. If these occur in the portion of the plaster that moulds the gum, the pink rubber will be forced into them and the dark rubber will follow and we will have a fine dark spot in the finished gum.

Now comes the packing. If dry heat is used there is no need of packing the rubber into each hole in the diatoric teeth. The transverse holes are open, as they were filled with wax which has now been washed out.

You will remember that I advocated the moulding of the gum in the upper part or cope of the flask. A solution of pink rubber is painted on to the gum portion of the mould and allowed to dry thoroughly—preferably with heat. One thickness of pink rubber only is now to be packed onto this painted portion and down between the teeth only so far as the gums should reach. Let the dark rubber go down between the teeth. When this is cleaned away it will look like a space and is far less unsightly than the pink. Now pack the darker rubber, and when, in the judgment of the workman, there is nearly enough in the case, a piece of the cloth that comes between the sheets of rubber, from which *nearly* all, but *not the whole* of the starch has been washed out, is placed over the cast, and the flask brought together and pressed. The case is to be opened, and it is easy to see where more rubber is to be added.

In finishing the plate there are two little tools I wish to mention.

One is a fish-tail chisel for carving about the festoons of the gum, and a pointed tool much like the point of a hat pin or darning needle for cleaning out the rubber between the teeth. You will notice that I have described a process calling for plain teeth only. I use these entirely. If a case comes to hand that shows the gum badly, use longer teeth and let them extend up further beneath the lip.

I am going to show you a flask of my own design. It was intended to prevent dark joints and broken sections when I was using gum sections. And it does it nicely if care is taken; but as our good friend Dr. Requa has often told me, it reduces to a minimum misfitting plates, as it allows of no warping. It weighs over three pounds and is not intended for the small, good-for-nothing vulcanizers that our dealers sometimes impose on our fraternity. I would not purchase a vulcanizer that had an inside diameter of less than 4¼ inches.

I mentioned above the waxing of the holes in the diatoric teeth. When the case is washed free of the wax and heated there is no danger but that the rubber will go to its place and fill every part of the tooth and the transverse holes.

All of my lower impressions are taken with impression compound, preferably that made by S. S. W. Co. The object of this is to press back the soft parts as much as possible, and I believe that less *paring* of the plate will have to be done when placed in the mouth, for the reason that the soft parts are compressed till the plate rests on the hard parts, while with the plaster impression the plate will rest on the hard parts first. Our old friend Requa always used ordinary wax and claimed it was better on account of its pressing away the soft parts.

After the impression, made of impression compound, is cooled, add a few drops of alcohol to get rid of the water, and then, wiping the varnish brush fairly dry, varnish the impression with sandarac thus diluted by the alcohol on the impression. You will be surprised at the smoothness of the cast and the ease with which the impression is removed.

In taking impressions for regulating cases, I have an impression tray which is surrounded by a tube. After the impression is taken, and while yet in the mouth, a stream of cold water from the fountain spittoon is passed through this tube and the impression thoroughly cooled. This saves drag on the impression and a more perfect result in the cast.

Now in regard to some matters that trouble the youngsters, and from which the older ones are by no means free. Mrs. D. F. comes in for a set of teeth. We make them to the best of our ability. They look well, they please us, and they please the patient; but, alas! Mrs. D. F.'s neighbors all say that this, or that, and the devil knows what, is the

trouble and dissatisfaction is rife. It is well in all cases to inform the patient before operations are begun that a change can be made then and not afterward, and if the whole neighborhood is to pass judgment on them it is well to bring the whole neighborhood to the office before the work has gone to a prohibitive point and let them all pass judgment. Pointing out this forcibly will probably eliminate the neighborhood element. Also at the very first sitting instruct the patient not to expect too much of a set of artificial teeth. That if they get to use them with comfort in a month they will do well.

They may give you the old song about Mrs. Jones, who says she prefers her artificial plates to her own natural teeth—perhaps they may bring Mrs. Jones in to corroborate the statement. Tell them frankly that there are three horns to the dilemma, to wit: either Mrs. Jones forgets, or she had teeth that troubled her by aching or ulcerating and she obtained no release from her pain until they were gone, or else she *lies*—and the chances are it is the latter—for if she told you she had a cork leg and preferred it to her natural one you would know these statements to be false. Artificial teeth and artificial limbs are of the same genera.

In other words, be perfectly frank, and do not be afraid to smash the exalted ideas of the patient in regard to the efficiency of artificial teeth. Let them be disappointed happily, not the reverse.

The way I use pressure anesthesia for pulp extirpation is first, of course, to expose the pulp, which is usually done with one or two sharp quick cuts of a spoon excavator, the point of which is large enough to prevent puncturing the pulp; then a piece of cotton which has been wet with a 1 to 1,000 solution of mercuric bichloride to which has been added a little cocaine is placed in the bottom of the cavity and soft rubber super-imposed and pressure induced by a piece of soft pine wood, the end of which has been previously whittled to approximately fit the cavity. In this way there is far less danger of breaking a weak wall and better pressure on the desired point is gained.

In case the engine has to be used to expose the pulp, do it with a large round bur so that a puncture is not easily produced. The bichloride is a disinfectant and there is small chance of infection where it is used.

After the removal of the pulp I usually fill immediately, filling the canal with cotton well soaked with a paste of oxpara and packed hard; first, however, to prevent soreness, place a very small piece of cotton soaked with oil of cloves and zinc oxide at the apex and then force the oxpara well into the cavity, packing it with the broach and other pointed instruments. Many may object to the cotton, but I see no cause for

the objection, as the paste is forced to its place by the vehicle of cotton. If the oxpara will in a paste form preserve the root, it will also care for the cotton, and I believe the root will be more thoroughly filled than when gutta-percha points are used.

A while ago I gave you some nerve broach handles. Do you wish some more? Here they are. They are made from a flat piece of metal drawn to required size in a draw-plate—really jewelers' hollow wire. The broach is fastened into the handle by shellac and the varnish, but the gum itself, heated.

In shaping cavities for inlays I do not think anything but a fissure bur should be used unless it be the small cylindrical carborundum points that we find now on sale. The cavity should always possess "*draught*" as the moulder would say, and one of the finest sprue wires to be had consists of the eye end of a No. 1 needle. It is smooth and tapers a little and is easily obtainable.

In taking the impression for an inlay, a mass of wax considerably larger than the desired filling is to be used, preferably on the finger, and the surface warmed almost to the melting point, forced into the cavity and then pared down. Do not attempt to build it up, especially after it has become wet, for the least particle of blood or saliva that accompanies the model when it is placed in the investment will produce an ash and consequent imperfect casting.

A little trick that is very convenient in spatulating the wax model and also in inserting cement fillings to prevent the wax or cement from adhering to the instrument is to wipe the point of the instrument on the forehead or at the side of the nose of the patient to slightly oil it. Tell the patients why it is done and they will not object. It is far better to do this than to wipe it on your own nose and get caught at it.

I do not believe a better investment can be obtained than that composed of three parts finely ground silex and one part of plaster well sifted through a bolt cloth several times to insure thorough mixing. After the wet investment material is placed in the cup or ring the model should be painted with a fine stiff brush, preferably a sable brush, until every part of it is covered and all bubbles in the investment obliterated, care being taken to paint well into the angles between the body of the filling and the little wings that overlap the edges of the cavity. It is then lowered into the investment in the cup.

In placing the filling in the cavity it should fit without rocking, and being held in place by a strong instrument the edges should be burnished onto the tooth. In setting, first wash the cavity with water, then alcohol and then dry thoroughly. The filling should also be perfectly cleaned and dry, which last can be attained by heating red-hot in the flame and

allowing to cool, and then not touching it with the fingers no matter how clean they may be.

After being cemented in, it is my custom wherever practicable to wedge it to its place by a piece of pine dipped in sandarac varnish forced between the filling and an adjoining tooth. Otherwise, when not practical, I ligate it with silk. Often it is desirable to set a Logan crown with something between it and the tooth. Many use gold forced in by the casting process. A good substitute for the gold is vulcanizable gutta-percha. It is placed around the pin, warmed and forced to place, removed and pared, readjusted and then vulcanized. In places where it is hidden from view it is as good as the gold.

In cases where from undue sensitiveness or other causes it is difficult to cut down the occlusal surface of a tooth that is to be crowned with gold and it is desired to have as much gold as possible to give wear, first make the band of 22k. gold and trim it down till its edge is a little below flush with the occlusal surface and solder on piece of 24k. gold about 36 gauge thick. Force this onto the tooth and burnish this thin gold onto the tooth; remove and build up the occlusal surface of the crown on this thin gold. File and cut to occlusion. You will then have all the gold possible over the crowned tooth and reduce the liability to wear through.

Sometimes a crown has to be removed from the tooth and the tooth treated. Often it is not an easy matter to repair the old crown, for the edges of the cut are ragged and distorted so they cannot be brought together. Take a piece of very thin 24k. gold and make a short bend in it. This bend is pinched onto the edge of the crown and its longer leg is burnished onto the outside of the crown, covering the gash. It is then easy to solder. The little short leg is easily cut away by the engine.

Where gum sections are used, even when the utmost care has been taken, a black joint will often be found. Set the heel of the plate in plaster, warm the front of the plate, and with a knife or wedge-shaped tool spread the joint carefully. When cool, with a fine saw remove the objectionable rubber and warm the case and press together again. This may save us several hours' work. Be careful not to cut the body of the plate—just remove the offending rubber. Warm and press back to place.

Another little trick. In setting a crown that has a pin for the pulp canal it is often difficult to be assured that the cement is in the bottom of the canal. Place a dab of cement over the cavity, and with a fissure bur in the hand-piece, reversing the engine, work the cement quickly to the bottom. I accredit this to Dr. Line.

In casting zinc dies do not, for the purpose of thickening the cast-

ing, use a metal ring. It causes the outside of the casting to cool quickly and more shrinkage will take place, causing a lifting of the metal in the centre of the palate just where it is fatal to swaging a perfect plate. Make the mould all in sand. As a deep pattern is less easily removed from the sand than a thin one, make two parts; first, the ordinary-sized cast such as is used for rubber work well beveled, especially at the rear, and then having varnished the reverse side, make an addition. Small guide holes should be made in the cast so that the addition will be held in place.

In removing the model from the sand, first remove the addition and then *shake* out the cast, holding toe of the cast downward while doing so.

I will reveal the formula for what, so far as I know, is a new metal for dies for gold plates. It is composed of equal parts of zinc and tin. It has absolutely no shrinkage, and it permits of the counterdie of lead being cast upon it. Care, however, must be taken not to handle it when at all hot, as at a temperature of even 300 degrees it is somewhat plastic and easily broken.

DISCUSSION

Dr. Proseus.—Dr. Beebee in opening his paper speaks of the dental laboratory. I always envy a man who has a good dental laboratory. It calls to mind how nice it would be if the profession of to-day could adopt some of the methods of the older dentists which we have been hearing about and go back and all have a good laboratory again. And have a young man as a dentist assistant in our office. It would mean so much to us. The present manner of our education and the laws almost make it impossible for us to have a young man with us, and the young men are to-day illegally practising in the office of the quack or advertising parlors. If the colleges would only allow one year off from the regular course in case the young man had been three or four years in the office of a reputable dentist, it would mean much to us and more to the young man. The four-year college course should have been continued upon this basis; instead we have retrogression and the very establishments strengthened that the ethical wish wiped out.

Dr. Beebee has given many practical points, and when you come into his laboratory you find things there—most everything—when it seems that I cannot find a certain thing anywhere I go to him; and when the dental depots do not have it Dr. Beebee will, and if he has not the article he can make it in a little while.

He also speaks of the wax impress, and taking a plaster impression over that. I find it gives accuracy to the impression and makes the cast easier of separation. I would prefer liquid silex for separating to shellac.

He speaks of several new things in his paper that I believe have never been men tioned before. Modeling the wax gum about teeth with a spatula made out of hard wood or orange wood. I see no reason why it is not worth a trial.

As to the point of packing the plate. The doctor touched upon that, using the pink rubber or the pink rubber solution. I do not find it necessary to use that. If the pink rubber is packed without the solution it will not flow to the front except at the line where the flasks are separated.

I pack the black rubber under the pins first, then smaller pieces of pink rubber can be laid right on the black rubber which holds them, and then a long piece of pink rubber over that and the whole is packed. Then you can add the black rubber, and with this method facilitate packing, and there will be absolutely no change of pink rubber.

He spoke of pressure anesthesia. I believe as good results are secured in using cocaine, large German crystals, and I have had the best results by taking a small piece of cotton and wetting it in the solution and putting it right where I wanted

it. A dissolved pellet sometimes travels below the dam, and I got anesthesia of the part below the tooth itself, which was not desirable.

In regard to taking the impression with modeling compound. It is good if supplemented by taking a preliminary impression. If preliminary impression is taken and a tray fitted to that preliminary cast so it approximately fits, then taking the next impression by medium softened compound by stretching the cheek muscles and raising the tongue, one will get success in that way and such plates retain their positions well.

In regard to filling the roots with cotton and oxpara. I have never tried it, but I have used Schuero paste a long time, and I would say from my own experience in filling a root that in any of those methods after you have it filled always close the entrance to the canals with a piece of gutta-percha. You will sometimes have a washing out of a filling or decay after the gum has shrunken. If you take that filling out you will find that some canals are absolutely empty. The fluids and time have dissolved the formaldehyde paste and canals are empty. Put in a small piece of gutta-percha and you will prevent this.

Speaking of using cotton for root canal filling—perhaps no greater operator ever lived than Dr. J. Foster Flagg, and I believe he was the man who first so advocated the use of cotton. He did not use absorbent cotton, but just raw cotton. A bale will float in sea water for months and upon opening be absolutely dry. I have removed a piece six or eight inches long from a root canal; at the entrance of the canal the upper portion of that cotton could be grasped in case of the removal, and the whole piece would come out. Occasionally to-day you will run across one of those teeth.

I think Dr. Beebee's paper was one that takes us over a large field, and I congratulate him upon his handling of the subject.

Dr. Smith.—Dr. Proseus spoke of filling with cotton. I happened to see a tooth filled by Dr. Flagg, the canal of which had been filled twenty years, and it seemed just as strong as when first filled. The tooth had been well taken care of for twenty years.

Dr. Beebee.—I spoke of filling the upper end of the root with cotton, a very small piece which was impregnated with oil of cloves and oxide of zinc. It makes a pretty good paint. "There is a drying oil and oxide of zinc." Much of this is used in certain kinds of paint to-day, and it becomes almost like a piece of dry putty. The oxide also becomes quite hard after a time, and the cotton has simply been used to carry it and been left there. You have reduced the amount of paste you have in there, but I fail to see any objection to the cotton being used anyway. It is simply the vehicle and it is left there. And after twenty or twenty-five years of using cotton in that way experience has shown that there is nothing objectionable.

SOMNOFORM—AN IDEAL ANESTHETIC FOR OPERATIONS OF SHORT DURATION

Roy W. Dunlap, M.D., Fort Worth, Texas.

It is my aim this evening to present to this Society some data concerning an anesthetic on which the dental fraternity is much better posted than is the medical profession. The reason is simple when it is known that the manufacturers have an expert demonstrator at every dental society meeting.

This wonderful agent was first produced in 1895 by Dr. George Rolland, Dean of the Bordeaux Dental School. It is the result of a demand by the dental profession for something that would "produce a rapid anesthesia, easily brought about and presenting no danger; followed by a quick return to consciousness and having no ulterior sensations." All these requirements have been fully met in somnoform,

which is the name given Dr. Rolland's mixture of ethyl chloride, 60 per cent.; ethyl bromide, 5 per cent.; and methyl chloride, 35 per cent.

I will take up the requirements in rotation and show that somnoform fills them all. Somnoform produces anesthesia in from fifteen to forty seconds, with no struggling on the part of the patient; thus rapidity and ease are fulfilled. As to safety, there have been but three deaths in the United States out of over a million anesthesias. These deaths took place in Rockford, Ill., Grand Rapids, Mich., and St. Louis, Mo.; all were the cases of dentists, and two of them were the result of deception on the part of the patient. The return to consciousness is very easy, as the patient awakens as from a pleasant sleep in about forty to sixty seconds from the time the inhaler is removed.

Somnoform is a very volatile fluid, coming in fragile tubes which are broken in the inhaler at the moment of commencing the anesthetic. The fluid runs into the inhaler and is absorbed by a canton flannel cloth. Over this cloth passes the breath of the patient. Somnoform has a slightly pungent, ethereal odor which is not particularly unpleasant.

In a case when the patient is not excited the anesthetic is taken with no struggling nor discomfort, the patient going rapidly to sleep; a gentle snoring ensues, and the corneal reflex may be lost in four or five inhalations. Insensibility takes place in from thirty to sixty seconds and continues for about that time after the removal of the inhaler. During this period any operation that can be performed in this time may be done with safety.

At the beginning of the administration the pulse is slightly accelerated, respirations are slightly decreased. No modification of the blood takes place and the urine of anesthetized patients is normal. In patients anesthetized for experimental purposes the pulse was accelerated for one and a half minutes and for seven minutes was normal. At the end of this time the administration ceased.

I purchased our somnoform outfit about three years ago and have used it about 300 times. It has been most frequently used in the removal of adenoids. Unadhered tonsils can be removed under the action of one tube. It has been a great boon to patients and assistance to us when drum-membranes were to be incised, furuncles opened or granulations removed from the auditory canal.

An outfit will find daily use in the hands of the general practitioner in the opening of abscesses, application of cautery, eversion of toe and finger nails, removal of external piles, removal of drainage tubes and dressings, breaking up urethral strictures, reducing dislocations and many other uses that will at once suggest themselves.

The great superiority of somnoform over all anesthetics is the safety;

one need not fear to give it in the office. There is no marked period of excitement and nausea follows in about 3 per cent. of the cases. The rapidity of its administration and the patient's recovery therefrom are also strongly in its favor, as patients are recovered and ready to go home in less time than it takes to anesthetize with chloroform or ether. It is superior to nitrous oxide, its nearest competitor, in that there is no death-like appearance which causes consternation to onlooking friends.

In closing, I can only say that after three years we depend on our somnoform outfit more and more, and it has not disappointed us yet.

HOW TO FILL TEETH WITH GOLD

(Continued from May number.)

J. V. Conzett, D.D.S., Dubuque, Ia.

The final class of cavities which we will be called upon to consider are the simple cavities in the occlusal surfaces of bicuspids and molars, the cavities occurring in the lingual pits of incisors and the buccal fissures of molars. These cavities are so simple that it would seem to be superfluous to include them in a course of instruction; and yet we so frequently find the preparation of these cavities so manifestly incorrect that it will pay us to spend some time upon them.

We have grouped this class of cavities together, because in their preparation about the same method of procedure must be adopted.

The cavities when ready to fill should all be of the simple box-form, flat seat and parallel walls. In the cavities involving the occlusal surfaces of bicuspids and molars we often find the point of entrance very small, so small indeed that it is often overlooked until the decay progresses to such an extent that the overhanging enamel walls break down and a very large cavity suddenly appears. It is well in making an examination of the teeth to carefully inspect all of the fissures of the teeth, especially in children's teeth, and if the point of the explorer finds a point of issue, examine it carefully, and if there is decay, or if the enamel plates have failed to unite, cut out and fill. In all of these cases cut all of the fissures to their entire extent. We often see cavities in these surfaces that have been filled only to the extent of the primary decay, and the fissures radiating therefrom left entirely exposed. The consequence is that such fillings fail by reason of a secondary decay occurring in the fissures.

In conversation with a dentist at one time I was informed that he

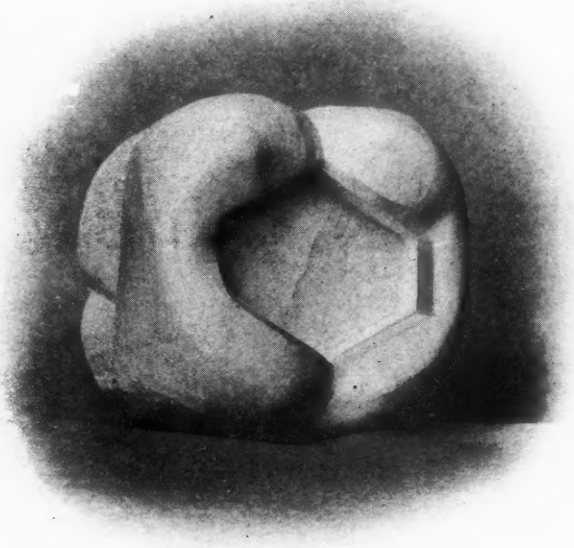
always charged one dollar for every cavity he filled with amalgam in the same tooth, and it did not make any difference how many cavities there might be in that tooth, he charged for each one of them. I was properly impressed, of course, until one of his patients presented with six small fillings in the occlusal surface of a lower molar and decay connecting these little pin point spots along the lines of the fissures. I cut them all out, made one cavity of the six, and expect it to last. Cut

Cavity in occlusal surface of bicuspid. Box-like form, removal of pitted and fissured area, and bevelled margins.

out all of the fissures until you get to the end of them and can finish your filling on a smooth enamel territory.

This is a place where it would seem to require no argument to substantiate the claims of extension for prevention; but as I have said before, the evidence that we see every day of its violation calls for emphasis of the doctrine at every point: when the fissures have been followed out with a fissure bur, or a small inverted cone bur undermining the enamel, with a chisel break down the enamel wall until you obtain the outline form, which, in these cases, must be in accordance with the conditions you are called upon to meet. If there is not much decay, do not sacrifice much of the tooth; only cut wide and deep

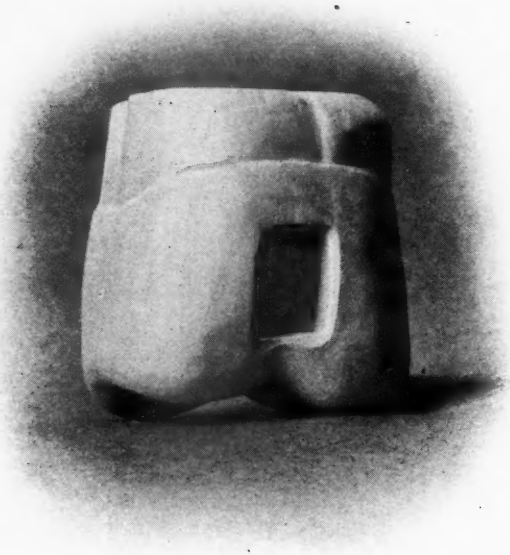
enough to thoroughly anchor your filling, and only wide enough to bring all of the margins into smooth territory. When the outline form is obtained, with an inverted cone bur as large as the case will permit, cut the floor of the cavity perfectly flat. If there is an unusual penetration of decay at one or two small points that are so deep that it is not justifiable to cut the whole floor of the cavity deep enough to eliminate them, flatten your floor without regard to them; then cut out the decay later and treat them as indications may demand. When



Cavity in occlusal surface of molar. The entire area, likely to be involved in subsequent decay, has been removed.

the floor is flat, make all of the side walls parallel. This may be most expeditiously accomplished with a fissure bur, followed by angular chisels. When the floor is flat and the walls as nearly parallel as possible, you have an ideal cavity preparation in case it is deep enough. Always cut through the enamel, anchor in solid dentine and make the cavity deep enough to contain a sufficient mass of gold to resist the stress of mastication without flowing. Cavities in the buccal fissures are treated about the same way. The fissure must be extended its entire length and in many cases, where the occlusal surface is involved, it is wise to cut through to the cavity in the occlusal surface and fill as one cavity. In either case, extend the cavity to the limits of the

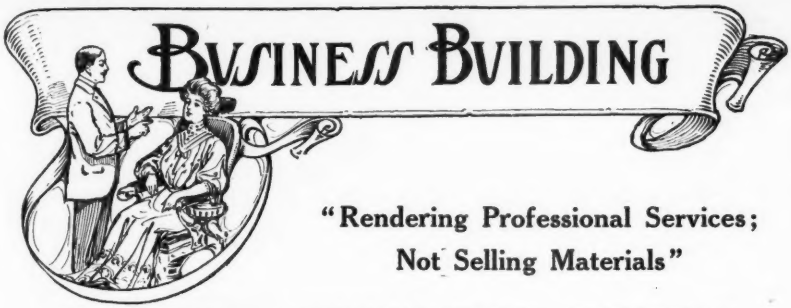
fissure, and cut deep and broad enough to afford anchorage. It is obviously not necessary to cut very much for resistance in these cases, as the stress brought upon such cavities is very small. Again make a flat seat and parallel walls, and again let me emphasize the uselessness of grooves. I feel the necessity of urging these points every time I attend a clinic and see men resorting to these useless, tooth-destroying methods of retention. There is absolutely no need for grooves and pits; they weaken the tooth and make the cavity harder to fill. Cavities



Cavity in buccal surface of molar. The margins are carried to sound tissue and "areas of immunity"

in the lingual surfaces of incisors are difficult only by reason of the difficulty of access. They should be prepared along the same general lines. Cut out all of the fissures and enamel imperfections until you get a smooth cavity margin. Then make the cavity with flat seat and parallel walls, and you have your perfect box cavity. In these cavities, as in all cavities, finish your cavity preparation by beveling your cavo-surface angle to protect the enamel rods at the margin of the cavity.

In our next paper we will consider some of the methods for obtunding the sensitiveness of the dentine, etc.; the treatment of the sensitive cavities after excavating and the toilet of the cavity before filling.



"Rendering Professional Services; Not Selling Materials"

THIS MAN MADE A FINANCIAL SUCCESS OF DENTISTRY WITHOUT SACRIFICING ETHICS

GEORGE W. CLAPP, D.D.S.

THIS is the story of Dr. Howard J. Hill, formerly of Alma, Nebraska, now resident in Lincoln. It is written and illustrated here in the hope that it may spur every dentist who is not now financially independent, to such study and application of business methods as will make him financially successful. Note the exact wording of that last sentence *"the application of business methods"*; not longer hours or harder work or lower fees. Everywhere over this broad land dentists are working long hours and are financially unsuccessful. Everywhere also, many are working as hard as they can for the lowest fees they can establish. And because the fees are low and they do not get all of them, 90 per cent. of the practitioners are commercially unsuccessful. Moral successes most of them are, and we are proud of it. Commercial successes, we expect them some day to be; and proud enough shall we be then.

I never saw Dr. Howard J. Hill, but I've heard about him from many sources. And all the speakers voiced respect. Not one of them mentioned that he was far famed for his literary or scholastic abilities. But every one of them spoke of him with vast respect as a man who had achieved success honorably. And let me put it in here for the inspiration of any who need it, that the honorably successful man always gets a hundred fold more respect than the equally moral man who lives from hand to mouth.

I don't know how much money Dr. Hill had when he went to Alma, but it couldn't have been very much, because he began practice in a back room with a second-hand barber chair to receive his patients and an old sewing machine frame and drive wheel for his lathe.

Alma was then (1887) such a town as most men would have either failed in altogether, or would have made a 10 per cent. success. I have been in hundreds of such small places in our great West. In most of

them the dentist is, even to-day, regarded as well-to-do, who owns his own home and 80 acres of farm land outside the town.

The country about Alma was not as thickly settled nor so well improved as it is to-day. It took a wide territory to keep even one dentist busy. So at first packing his little kit and later establishing offices, Dr. Hill "made" the neighboring towns at such intervals as the demand required. Times got so hard that all the other dentists in two counties moved out. To the keen business eye of this man, here was a golden opportunity. Through thin as well as thick he held on, and when prosperity returned, the dental business was his. Soon numerous offices in Harlan and Franklin counties were opened by Dr. Hill. Into each office was put a carefully selected assistant. With straightforward, ethical methods, the offices prospered, and all of them are prosperous to-day.

Meantime the Alma office had grown. From the little back room, its activities spread to one adjoining room and then to another. After a while the whole building was purchased and the upper floor remodeled to suit the needs of this enterprising office. When finished, it included seven rooms with the most modern equipment and accommodated two operators, a laboratory man and the necessary assistants.

The home started with equal modesty in four rooms, by no means overfilled with comforts. Five years later a home built especially for the family gave evidence of thrift and prosperity.

Alma is now a town of 1,200 inhabitants, as little known to the world in general as a thousand other small places. It would naturally afford about enough business to keep one dentist half-way between poverty and affluence. Yet here Dr. Hill built up an annual practice of over $10,000. The town and its immediately adjoining territory could not support such a practice. People must have come from far as well as near; they must have come repeatedly.

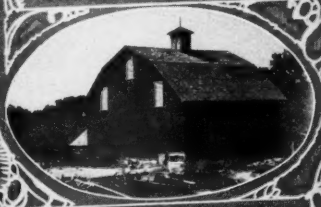
In a small community only one thing would make this possible—a good reputation passed from mouth to mouth. Skilful dentistry and square dealing has to go hand in hand. *In a big city, a practice may be kept going on transient* business. "Get 'em once and get 'em hard" may work there. But in the country such a course would be suicidal in a very short time. *You must be skilful and square if you* want to do a permanent business there. Our Western people are keen: they are straightforward: they are successful. *They will not long patronize professional men who are not skilful practitioners.*

So those of us who never met Dr. Hill or one of his patients, may know as well as we need to, merely *from his record, that he did good dental work.* He was more than a skilful dentist. He was a good business man. He knew enough to get good fees. He wasn't scared because

Cutting Alfalfa on part of 400 acre farm

One of the farm houses

From one small room to the entire second floor of the building



Barn of the 725 acre farm

The first home

The present home

Feeding 300 Beef Cattle

the man in the next town or across the street was working for starvation wages. He had too good a head for that. He used his greatest skill; he made his office so spick and span that it was a pleasure to enter it. He kept it that way. It cost the hire of an extra girl; but out along the highways and byways went words about his immaculate office. The women talked it over with approbation. And that approbation by the women, won through neatness and cleanliness, set Dr. Hill's feet in the pathway to fortune.

No protest as to exorbitant fees charged by Dr. Hill has ever reached me, but there was a sensible margin between the exactly figured cost and the fee. And he made sure he got the fee—all of it—and when it was due. He will tell us how he did it.

Dr. Hill discounted his bills. Dealers far and near knew him. All were anxious to sell him anything he would buy. They flocked to him. They camped on his trail. Just to find out about this, I once asked the financial man in a dental depot 1,000 miles from Alma "if Dr. H. J. Hill of Alma was good." He didn't stop to see if he was on their books, or look up his rating. Quick as a flash came the reply "You bet, good for anything you can get him to take." And that was 1,000 miles away.

Dr. Hill saved his earnings. Pleasures were his, but they were not allowed to eat away the steadily growing bank account. From time to time tidy sums were drawn out and intelligently invested in the fertile Nebraska lands at prices that would some day double. The assemblage of acres grew steadily broader, till they are now a real domain. Farms and farm houses; corn and corn-cribs, horses and cows, the cattle on a thousand knolls; hundreds of acres of alfalfa nodding to the summer winds are now entered in his name. Where he once dealt in dollars he now deals in thousands.

No more need the mallet rise and fall over the gold fillings unless he chooses. He and his may live out several natural lives on these broad acres with never a thought of office hours or dental fees.

But all this had its beginning in that spick, span dental office and in the arrangements for the pay. Without those, these had never been. The broad acres would appear in another's name. The big corn-cribs, the sleek cattle, the abounding crops would have filled other tills.

With the growing up of his children he moved to an educational center where every advantage was within their reach. He bought a fine business block, in a good location, remodeled the up-stairs for his own offices, and there conducts such a practice as pleases him, wholly, as he says, "to prevent rusting out."

Dr. Hill has written in a few modest words the secrets of his suc-

cess. It has taken much correspondence to get him to do this; and more correspondence to get permission to publish it. And still more correspondence to get these pictures which show some of the fruits of his industry and management.

He, like the writer, looks forward to the day when dentists will awake to the financial possibilities open to them, and when they shall prosper according to their deserts.

The few words that follow, coming from a man who has "made good" in so visible a form, should stir every dentist who reads them and who is not satisfied with his own financial conditions. From little towns and big; from hamlets and cities there lies a road to prosperity for every skilful dentist who will make himself an equally skilful business man.

How simple are the rules: how great the rewards!

EDITOR DENTAL DIGEST:

IN reply to your little list of questions headed "Cash or Credit" I want to give my experience. I practised 20 years in an interior town in a purely agricultural community. During 15 years of that time my practice averaged over $10,000 annually and I did not lose, in bad accounts, $50 a year. First of all, I made all the arrangements for payment before I began the work. If it was not to be paid for in cash at completion of the work, the patient said so. Then I asked when it was to be paid. They knew payment was expected on the day set, and so figured. If payment was to be put off for any length of time, I took bankable paper for it, and then charged them interest on the account.

I ran my practice on a business plan. My patients knew I expected my pay like any other business man; and they paid. If I was not fully acquainted with my patient asking credit, I made them frank inquiries as to why they wanted credit, for how long, and what they expected to have to pay the bill with. In 90 per cent. of the cases I had them give me a bankable note, drawing interest. All accounts not regularly arranged for otherwise were collected the first of the month following, no matter what time in the month the work was done. This is the way any merchant collects for his merchandise.

Simply be frank with your patients, and no honest person will get angry, as prompt collections are purely a matter of business and what they are doing every day in their own business. If you cannot get pay for the work, it is better by far not to do it.

In this city, to which I have recently moved, and where I am establishing a new, high-class practice, I am doing the same thing, only I am far more careful here than where I had lived twenty years and knew everybody.

The dentist should pay his own bills promptly. If for any reason he cannot pay them, he should explain why, should set a date and be sure to pay them then. Few dentists make it a rule to discount their bills. The amount they could save in that way would surprise many of them.

I claim it is possible for every dentist to collect practically every dollar for his work without trouble, if he will run his practice on business principles, as all other lines are run.

He can do just as much work and have the respect of everyone

far better by such a course, than by losing a large portion of his collections as many dentists are doing.

I believe a country dentist can get the same grade of work the city practitioner does, and he can save a great deal more money. I know this from my experiences here. I did at A—— any work done by a city dentist, and had the same equipment to do it with. My patients were educated to expect good work and pay reasonable fees for it. My office was always as clean as it was possible to keep it and that alone gave me a great part of my practice. It paid me to keep a girl for nothing else but to keep the office clean.

H. J. Hill.

This is dentistry as it should be practised. It is within reach of every man, according to his ability. Several dentists who have been assistants to Dr. Hill are now engaged in practice for themselves. They have adopted his business methods and are now making and saving money. That it is attained by so few is largely due to the fact that up to the present there has been a sort of ban on the exercise of business ability by professional men. The folly of such a course is now becoming apparent, and he best merits success and respect who rightly succeeds most.

DENTAL FEE BILL ADOPTED BY THE ALAMEDA COUNTY DENTAL SOCIETY

The Alameda (California) County Dental Society forwards to The Dental Digest a circular letter which, presumably, was sent to its members under date of January 5th. It is full of sense and ginger, and if the activities of the society are on the plans of this letter, the dentists of Alameda County are to be congratulated.

Here are a few quotations from the letter:

. . . . . .

"The Society is endeavoring to make membership 'worth while.'

. . . . . .

Recently we have established "who is who," which is an up-to-date dental rating list, and will be of mutual assistance to our members, making membership in the Society a paying proposition.

The adoption of uniform financial methods will act as a safeguard. This does not necessarily make uniform fees compulsory, although a regular fee bill has been adopted, which, it is hoped, will tend to establish a better income for the practitioners throughout the county. The Society aims to promote modern business procedure as well as modern operative methods.

A few men can do a little work, many men can accomplish a great

deal more, and with the moral support of every reputable dentist in Alameda County the force of our Dental Society would be felt throughout the entire county, and would redound a great benefit to the dentist. If you are not a member, we want you to join. If you are a member and do not attend, this is the time of the year for good resolutions. Resolve to go to every dental meeting in 1909. You will certainly be the gainer by it.

(Signed) WALTER R. HUGHES, *President.*"

. . . . . .

Accompanying this letter was the fee bill, reproduced below, which was adopted by the Society on January 6, 1909. It provides a minimum and maximum fee for practically all the operations common to dentistry. If the practitioners of Alameda County actually live up to this fee bill, they will enjoy comforts in the present and competence in the future. And they can each do as much annual business with these fees as they can at half the prices.

It all depends on whether they understand the importance and necessity of educating patients to the fact that dental services are *professional* in character and are entitled to compensation as such.

These fees and education of patients mean financial success. Without education of patients, the fees may not succeed.

On February 24th the editor addressed the following letter to the President of the Society.

FEBRUARY 24th, 1909.

DR. WALTER R. HUGHES,
Alameda, California.

Dear Doctor: As editor of the DENTAL DIGEST I am greatly interested in the letter which reached me some time ago, enclosing a copy of the letter sent to each member of The Alameda County Dental Society, and a Fee Bill.

The DENTAL DIGEST is particularly interested in assisting dentists to establish fees, that will give them proper returns for their services. It is not working toward a uniform fee bill, but rather toward an intelligent basis for fees.

I am very much interested, after studying the fees in this bill, and ask how many of your members have signified an intention of accepting this bill, and how many out of these you think will really accept it? That is, how many do you think will use it without making any cuts in prices below the minimum given?

I should be very glad if you will write me fully on this subject, and if you would give me permission to publish the important parts of your letter in "The Business Building Department" of the DENTAL DIGEST.

Yours respectfully,
GEORGE W. CLAPP,
Editor, THE DENTAL DIGEST.

Up to May 10th no reply has been received. The editor would be pleased to hear from any member of the Society as to the success met with in the adoption of this bill.

Dental Fee Bill

Adopted by the Alameda County Dental Society

	Minimum	Maximum
For examination or office advice	$2 50	$5 00
Operating (including cleaning, treatment, esthetic work and fillings) per hour	5 00	10 00
Visit at patient's home (not consuming more than one hour)	5 00	10 00
Gold or porcelain inlays, according to time	10 00	25 00
Extraction—Ordinary	1 00	
With local anesthetic	2 00	
With nitrous oxide, somnoform, etc	3 00	
Bridge work—per tooth	10 00	20 00
Single gold crowns	10 00	20 00
Standard, Richmond crowns, etc	15 00	25 00
Plates:		
Gold (full), single	100 00	200 00
Aluminum	30 00	50 00
Vulcanite	20 00	30 00

Fees for professional services are due at the end of each sitting.

When fees are not paid at such time, monthly statements are rendered and accounts become due.

A WELL CONDUCTED DENTAL EXHIBIT—BY AN EXHIBITOR

The Seventh District Dental Society, N. Y., has just closed a meeting, the exhibit side of which might well serve as a pattern to many other dental societies. It was held at Hotel Seneca, Rochester. To begin with, the exhibitors were assigned desirable quarters, a large room on the second floor and closely adjoining the lecture room. Next, the exhibit room was beautifully decorated, being draped with garlands in green, and genuine oriental rugs carpeted the aisles.

Every need was promptly and graciously attended to by Dr. E. G. Link and his able associates. Lastly, these men saw that the exhibitors got a liberal share of the time and attention of attending dentists.

While the meeting was not a large one in the sense of great numbers attending, the whole impression made on exhibitors was one of the most favorable the writer has known. If more societies would adopt such policies toward their exhibitors, the results would be better for all concerned. There might be fewer banquets and less jollification, but both the societies and exhibitors would be benefitted.

SEEN THROUGH THE PATIENTS' EYES

The editor addressed to a number of patients the following little list of questions. This was done to confine the expressions to a certain phase of dentistry at this time. Some of the answers are given here. They are of the greatest importance to every dentist who hopes to make a commercial success of his practice. Many a good patient is lost to some dentists because of the impression the reception room makes as the patient enters. Many a patient is held against severe competition by means of the confidence born of the up-to-date equipment and painstaking cleanliness. These things are really cheap in the end—too cheap to do without.

Here are the questions:

What impression does the office of a dentist whom you do not know make before you see the dentist?

Does it make you feel that you wish him to do your dental work or does it raise a doubt in your mind?

Is a favorable impression made merely because an office is finely furnished, even if it is untidy?

Does a neatly kept reception room, even if modestly furnished, make a better impression than a finely furnished room ill kept?

When you get into the operating room, do you notice whether the equipment seems modern? If it is modern does it impress you more favorably? Wouldn't you prefer to patronize a dentist who has modern equipment?

Don't you feel that modern equipment helps a dentist do better work?

It is impossible to over-emphasize the importance of absolute cleanliness and order in a dentist's office—not simply in the operating room, but in his reception and consulting rooms. Only exceptional circumstances will ever remove the disagreeable impression received by a person who visits a dentist for the first time and finds himself in an untidy reception-room—on the floor a faded carpet, nice in its day, which was a long time ago; two discouraged-looking plush chairs, one of plain blue, the other of figured green, both with the nap worn off the back and arms by a long succession of nervous victims; a tapestry covered sofa, with a broken spring, in one corner; across the room two bentwood chairs of imitation mahogany; and in the middle an oak table covered with torn "comic" papers and uninteresting magazines not less than a year old; the whole pervaded by a general atmosphere of "clutter" and neglect. On the walls of such a room are always to be found art calendars advertising Swift's Hams, Castoria and the Prudential Life Insurance Company, setting off to great advantage old-time engravings tabooed by the dentist's family and doomed to spend their last days with his helpless patients.

Should the dentist's reputation be so favorably established that the new visitor has the courage to brave the horrors of waiting in this room until his turn comes, in spite of a yearning wish to leave before it is too late, he then goes into an operating room, where the first thing to meet his eye is a black walnut cabinet, with one hinge off the upper door, and a lower drawer half open displaying ghastly horrors. Passing this and wending his way by a table covered apparently with everything the dentist has been unable to get into the cabinet, but of which his hasty glance reveals chiefly an appointment book, a pile of appointment cards, a set of false teeth, a plaster cast, a spool of dental floss and an alcohol lamp, the victim finally reaches the chair of heavy red plush, which stands in front of an open window, where a brisk draft can play about his feet, steps hesitatingly onto the worn foot-rest, puts his head into the vise-like head-rest, and as a tray full of vicious-looking instruments is swung under his nose, utters a deep groan and closes his eyes. "The rest is silence," punctuated only by requests to "open wider" or to "spit."

Although merely a layman, he knows that this dentist, who, by the way, is dressed in a blue suit of heavy, rough material, with dusty sleeves and spots on the front of the coat, is not in line with the progress of his profession—that dentistry is now a science, an important and exacting branch of surgery, that the glass and porcelain fittings of any surgical operating room should find their counterpart here, since antisepsis is the guiding principle and foundation of all surgery. Knowing this, he either assumes an apologetic attitude toward the dentist, saying he "guesses he is good enough for the little I want," or goes elsewhere.

He is also aware that the canons of both policy and good taste demand an attractive, simple reception room, furnished with well-made but not necessarily expensive furniture, built in strong, simple lines, each piece in harmony with the others; that dust-catching upholstered furniture should be banished as untidy; that magazines torn and soiled from handling should be burned; and that there should be few pictures, and those in good taste. And the greatest desideratum of all, he knows, is to keep everything in such condition that the room *feels* clean, as well as appears so.

Being a layman, he cannot point out to the dentist the exact particulars in which his equipment is lacking; but he feels that something is wrong, and if later he goes to a dentist who is keeping up with his profession in its rapid progress, he at once realizes the improvement, and it is the latter dentist whom he continues to visit. At this man's office he finds a reception room which is at once business-like, tasteful

and attractive; a dentist whose white coat is immaculate; an operating room fitted out in spotless white, with every device possible to assist the operator to attain the highest ideal of modern scientific dentistry. (No. 3.)

When I go into the office of a dentist whom I do not know, I observe the details carefully and feel pretty sure before I see the dentist whether I wish him to do my dental work or not. If the office is finely furnished but untidy, it gives me a feeling of doubt as to his efficiency, because if he is careless about the appearance of his reception room he will be careless about the quality of his work. On the other hand, a modestly furnished, well-kept room gives the impression of a thoughtful, careful and thorough man, and makes you feel certain that he will do the best possible work for you in the most careful manner.

Upon entering the operating room, if I see that the equipment is modern, a feeling of security comes over me, as modern appliances mean less pain, work done in a thoroughly antiseptic manner, and a better and more lasting result.

It is my opinion no one can afford to patronize a dentist who is not up to date in his methods and who does not have modern scientific equipment, as the care of the mouth is vital to health and appearance. (No. 4.)

The general impression of a dentist's office—its neatness and modern appliances, or *vice versa*—has in a great measure the effect of giving confidence, or lack of confidence, in the dentist's ability to do the best work, the kind of work I want for my family and myself. Appearances are *sometimes* deceptive, but the condition of any man's working paraphernalia is a sure index of the quality and kind of his work.

If his appliances are old-fashioned or sloppy, even if his work is of the best, I would never have entire confidence that the character of the work in my mouth did not partake of the general character of his office conditions.

An untidy office, elaborately furnished, always gives me the impression that if I had anything done there I would be charged an exorbitant price for cheap work. If I were employing a dentist continuously, I would be more willing to pay a higher or even exorbitant price if I knew the surplus of his profits was going back into modern antiseptic appliances (by which I would be indirectly benefited) than into plush curtains and flashy furniture, which only tend to irritate a waiting patient who is at best uncomfortable.

A neatly kept reception-room, modestly or even plainly furnished, has a chance while you wait to indelibly impress upon you the general

impression of the dentist who maintains it—and "straws show which way the wind blows." A waiting-room also has the chance to depress or encourage a patient who is suffering from some malignant disease or who is waiting in great pain.

I would not submit to an operation in any operating room that I was not absolutely convinced was as modern as could be and the best possible. My money is precious, but it is absolutely no consideration in comparison to the preserving of any detail of my health. Modern scientific appliances, together with a favorable knowledge of the operator's experience and ability, give me confidence that my operation will be as successful as it is possible to make it. You ask if I would "*prefer* to patronize a dentist who has modern equipment," to which I reply that I would refuse absolutely to patronize a dentist who had not the most modern, for the best is none too good in such serious work.

To your last question I would say that a few years ago the New York, New Haven and Hartford Railroad tried to reduce expenses by leaving the brass work unpolished when the engine went into the roundhouse, with the result that the number of accidents increased considerably because the train crews took less pride and grew careless, showing the important effect of seemingly small details of environment. A shine on a man's shoes is not as good for the shoes as it is for that man's self-respect. Hence neatness and every modern appliance has an unconscious though none the less good effect on the better quality of any dentist's work. Every dentist can afford the best, too, because with the improvement in his office outfit will come a proportionate increase in patronage as sure as day follows night or as effect follows cause. (No. 5.)

CASH OR CREDIT IN AN ESTABLISHED PRACTICE

To what extent can an established family credit practice be changed to a cash practice without losing desirable patients?

How can it be done?

Some dentists who are beginning to see the desirability of getting their money as promptly as a tradesman would are asking these questions and want answers.

If you've had any experience in such an effort, write us what it was, whether it succeeded or failed. Maybe just your experience is what some inquirer needs.

Address

Editor DENTAL DIGEST,
47 West Forty-second Street, New York.

THE ECONOMIES OF DENTAL PRACTICE*

By Louis Jack, D.D.S., Philadelphia, Pa.

"ALL, WITH ONE EXCEPTION, HAVE DIED POOR"

Sometimes the proper heading of an article does not express that thing in the paper which most strongly seizes on us. For that reason we have set at the head of this article a paraphrase of one of its sentences.

Dr. Louis Jack read the paper before the Academy of Stomatology in 1908. He spoke from the personal knowledge of dentists and dentistry gained in fifty years of honorable practice. Read the second and third sentences of this digest carefully; then before you read further think what that meant and means. He wrote concerning the dentists of Philadelphia. When he wrote there were about seven hundred dentists in the city. During the last half century some hundreds of Philadelphia dentists must have died. His statement is that *all but one* died poor so far as earnings went, and left their families poor. Think of that! Is it not a terrible arraignment of our business methods? Shall it apply to us, individually? Shall we come to the years of infirmity without having made adequate provision therefor? Shall we leave our dependents unprovided for? Must they walk the treadmill of privation because we were careless or worse?

Dr. Jack tells how such misfortunes for us and ours may be prevented. Let us heed this voice of warning. Then days of adversity will find us ready; and the snows of age will find us happy, comfortable and independent, whether we are or are not still useful.—Editor.

. . . I have been impelled to make this presentation, because in our principal cities it has been a frequent occurrence to leading dentists, who have had the enjoyment of liberal patronage at generous fees, that few of them have laid by more than a small modicum of their earnings. In too many of notable cases their last days have been hard and bordering upon poverty. In this city in over fifty years, of those who had no interests, outside of their practice, who have passed out of this life, with only one exception, so far as I am aware, all have died poor and left little or nothing for the support of those depending upon them. This indicates an unfortunate and sad state of affairs. These so unfortunate, either by mismanagement, failure to take advantage of their opportunities, or by lack of frugality, had reached the period of decline of practice in an indifferent condition to meet this state of their affairs, and from necessity had continued working on to the end of their days without the ability to consider retirement, and the enjoyment of their latter days in comfort. . . .

We have now to consider the conditions that accompany the second stage of practice, the one of full employment. When this period is

*Read before the Academy of Stomatology, February 25, 1908, Dr. Howard E. Roberts in the Chair.

fortunately reached, definite means become necessary to foster this situation and to control the over-pressure, as well as to take full advantage of the opportunity. One may attain an overfull practice and not realize it. He may have his vital force overtaxed in the endeavor to maintain efficiency and to protect from loss by the overpressure. The tendency is to overwork in order to keep abreast of the demand, with the inevitable result of the impairment of the quality of the work and of reduced health by the effort thus required.

At this stage one may, as it were, be strangled by the overpressure of patronage. It is not expedient to endeavor to keep abreast of the pressure by longer hours of labor, as in a short period what is apparently gained by this is soon lost by lessened capacity and reduced vitality.

One of my associates in his early years of practice believed he could do any amount of work and maintain unlimited hours. My reply was, wait until you are fully employed, when your limitations will be found. When this period came to him, it was shown he could not keep at his chair as long as I, who was nine years older than he. This lesson I had previously learned, and had twice broken down in the attempt to keep up with the demand.

This condition brought me to realize the limitations of one's power and to adopt means to maintain constant efficiency.

These means led to the adoption of the rules formulated and published in an article on the Management of Dental Practice. See the *International Dental Journal,* Vol. XIII, page 81 *et sequa,* and in the proceedings of the Odontological Society of New York for 1891. Here will be found more details than can be herewith incorporated.

The system adopted for the alleviation of the condition alluded to was as follows:

a. The arrangement of fixed hours for labor.

b. The avoidance of interruptions by refusing to receive calls or have consultations or examinations except at a specified hour for these purposes.

c. The distribution of appointments as evenly as possible throughout the working months of the year.

d. This involved the orderly arrangement of engagements for the care of the teeth of patients, by which this distribution of time was effected, and thereby to limit as far as possible the occurrence of severe and protracted operations. That meant to require a renewal of service at a future and definite period for reëxamination, with the result that all patients so far as they would accept this arrangement were under continual engagement. Soon this became

nearly universal, and proved mutually agreeable and advantageous to both parties. The important effect of this arrangement is that it produces a common interest between the patient and the adviser. They are coöperating for a common good. On the part of the patient it tends to the safety of the organs under care. On the part of the operator it conduces to less tension and establishes a nearly permanent relation between the two parties.

e. And the employment of a secretary to carry out these arrangements, as well as to assist in various ways in facilitating operative procedures.

This plan enabled me to carry on an overfull practice for over forty years, with the result of the maintenance of health and efficiency during this period.

These general statements are all directly economic in their character.

I am disposed to place emphasis upon the question of sustained personal efficiency, which is inseparably connected with the state of one's health, which is determined very much by the effect of the peculiar strain upon vitality occasioned by the character of our work, which can only be avoided by limitation of hours spent at the chair. It is evident that one must be in good condition for efficient work every day, and every hour of each day.

The domestic environment in this connection also is of importance. To me it appears almost absolutely necessary, the home of dentists should be away from the office house, and preferably be in the open country, or in a neighboring village.

There one may receive the refreshment of purer air and the avoidance of noises which in the cities are inimical to profound sleep, so necessary for the removal of the wire edge of ruffled nerves.

With modest country living, daily active exercise, sound sleep and short hours, it is possible to work ten months of the year, and keep in sound condition until the gong of seventy years begin to disturb one's composure.

I have said nothing concerning the reward of increasing income which naturally should attend the period of full practice. How this may be secured, and how regulated is an important question. No one having a just moral tone will be satisfied with making the acquirement of money his principal aim and incentive in life. This motive verges upon avarice and leads to sordidness. All honorable persons avoid this motive, but it is undeniable that recognized skill is entitled to reap the material results of ability, and this in a manner somewhat proportioned to the demand for the service, whatever it may be. This is particularly acceded to in the professions. In medicine and in the law and in other

similar functions it is so. Should not the same benefit accrue to those practising our profession?

Granting this principle, how is this to be brought about? The public really have to settle the matter for us, but we have it in our power to induce the people to meet whatever legitimate requirements may be made upon them. This may be induced by establishing a correct appreciation of the value of the dental organs, and the importance of preserving them. . . .

When one has an equitable method of accounting, how may he reap an increasing reward? Must it not come by enlarging demand and be in proportion to the demand? In commercial affairs there is a solution of this matter. It may be said to settle itself by a common maxim. With us there can be no quick method. Here the supply of service by each of us is very limited. The cardinal principle may be laid down that when demand upon us for service becomes so great that efficiency is endangered and reduced income is threatened as the result of overpressure, it follows that the demand must be checked. At the same time the hours of labor should not be increased to the detriment of physical health.

The only legitimate method I consider applicable in this condition is a definite substantial increase of fees to new patients by direct announcement of the fact. This puts a check upon the overpressure. Notwithstanding this increase when a sufficient number accept these terms and continue to hold fast, the next result is to equalize to all. This plan simply amounts to bidding up the compensation. The same process may be repeated over and over again, if it is sustained by increasing demand.

This method of increasing the fee had been pursued four times, in each case with a substantial advance; it may cause some surprise that this plan was not a shock to the clientele. The result was to the contrary. During this period of elevation I had at different times three associates, who took over many cases of children and others who willingly accepted their services. These associates laid assured foundations of individual practice. They were relieved of onerous expenses and enjoyed other important advantages. This personal experience is related in illustration of the subject. I fail to believe that any difficulty should arise to those who, when the conditions warrant, choose to pursue a similar course, subject to whatever modifications the peculiarity of their situation might require.

Anyone confidently situated and courageous may proceed in this manner. Human nature is the same everywhere, as people appear to want what is difficult of procurement, particularly when their tastes or appreciation inclines them. With respect of notification of increase of

fees to new patients, this was announced upon engraved cards, which were not distributed—one was placed in a conspicuous place in the waiting-room. Others are left with the secretary to use at her discretion as a reply to a relevant question. Discerning persons see at once the value of such an announcement, and have leisure to consider what they may do when equalization takes place, as whether to remain, to withdraw, or to accept the services of an associate. . . .

We come at this point to an aggravating question as to losses of time caused by the lapse of appointments. Should a debit be made when loss occurs by non-fulfilment?

If one will estimate the cost to him of each of the limited number of hours he can safely be employed, he will learn how serious this loss is. Items entering into what is called rent, materials, instruments and incidentals of practice, and will add to these the domestic expenses of his family, the aggregate for a year has then to be divided by the number of hours assigned to ten months. If he is a frugal person and saves of his gross income one-third he will have to lose the profit of two hours to pay for the cost of the lost hour, thus the savings of three hours have been sacrificed.

It thus appears that the least charge for a lost hour is the cost of that hour, which thus reduces the apparent loss to the profit of one hour, but a just compensation for lost time by the fault of the patient should be the initial fee for an hour's service.

In this calculation one must deduct from the assigned number of yearly hours at least ten per cent. for various matters from which no income can be derived, such as renewals by the operator's fault, gratuitous service, personal disability and other losses of time from unavoidable causes. It, therefore, is just to hold our patients responsible for their deficiencies when the practice reaches the degree where the loss is actual. . . .

What shall be said of those whom the advance of years, lessening skill and diminishing opportunities coming upon them find unprepared to lay down their work. Without agreeing fully with Dr. Osler that the capacity of the average man reaches its climax at fifty, it is certain that some evidence of waning power appears to most men at from sixty to sixty-five, when the hand begins to lessen in its facility and precision, and some diminution of vision, however slight, is observed. Those who are not inclined to take their names off the roll should then prepare for making their latter years useful by cultivating practice in prosthesis and orthodontia, in either or both of which one of capacity for these branches may carry on a work of usefulness and satisfaction until the frosts of life's winter appear on their faces.

DISCUSSION

Dr. Edwin T. Darby.—Dr. Jack has touched upon subjects that are of vital interest to the dental practitioner. At the very outset he made allusion to the fact that only two men who had practised dentistry in the city of Philadelphia within a period of fifty years had accumulated a competency unless they had other resources, and died leaving their families well provided for. That seems a sad commentary upon the business ability of dentists. I presume the history of lawyers and physicians is much the same. It has been my observation that this same condition of things has existed also in other cities. In New York city many of the old practitioners, who were in full practice and thoroughly established with large incomes, have died poor, and I think in every city in this country a similar history would be recorded of those who have at one time had what might be considered a large and lucrative practice.

Just where the fault is Dr. Jack has in a measure pointed out. In the first place he has said that dentists are not good business men. They have not had business training nor the business instincts which men trained in business life have. At the same time the dentist (I single out the dentist because I am more familiar with his methods) does not take into consideration that he is able to work only a certain number of hours per day and to work efficiently only about ten months each year. . . .

I am sometimes asked why dentists do not save money. I cannot say that it is because they make their money easily and spend it freely, because I think no class of men work harder than the dentists. I suppose it is the want of business training and not realizing that the "rainy day" is coming, that old age is creeping on slowly and that they will need any more in the future than they need for the present. They spend their money, I will not say recklessly, but perhaps extravagantly, just because they think they will get more money the next day.

Dr. James Truman.—I suppose that my experience will go back, probably, as far as Dr. Jack's, as we both graduated at the same time. I was surprised to hear that there were two men practising dentistry in Philadelphia who had died rich. I never knew but one. I believe that Dr. Jack, with his valuable experience, as he has detailed it, has done more for the advancement of dentists in the direction of good business than probably any other man in this city. If I had only been equally as good when I was young as he has proven to be, I would have a little more to live on in old age. . . .

I think we all agree that one of the things the young dentist most needs to-day is business qualification. One of the most valuable aids

to me was the time spent when a young man in a business house. I am very glad that Dr. Jack has put these facts so plainly before the Academy, and I hope that his paper will be widely read. Every dentist should understand that his practice should be managed according to certain rules, and that if it is not thus carefully managed there will surely be loss. We all know of men in our city who at one time had large practices, but failed utterly through lack of business ability. These eventually either passed into homes or died leaving those dependent upon them without proper support. I know of no better rule to guard against this than that suggested by Dr. Jack of regarding the value of every hour.

Dr. William H. Trueman.—The suggestions thrown out by Dr. Jack are worthy of your earnest and most thoughtful consideration, coming as they do from one who has had so eminent and so successful a professional career. He has well said every vocation properly conducted should furnish those who follow it a fair maintenance during the active years, and enough over to insure comfort during the autumn of life. Observation confirmed by biographical reading has impressed me that to be considered fairly successful one should, during thirty years of business life, have laid by sufficient that the interest therefrom will furnish a comfortable living to the worker and the worker's dependents—barring, of course, serious illness and dire misfortune. To accomplish this it is necessary to save something every year; a little when the income is small, and more as it increases. . . . A dentist reaches his " top notch " at fifty. If he has not then a paying practice, he never will have; if he has then saved nothing, his harvest is passed.

Dr. G. L. S. Jameson.— . . . I believe that our services command, to a certain extent, just the value we place upon them. I have tried to follow in a measure the system of Dr. Jack. While I have lost patients, others have come, and the new ones knew what they would be required to pay. We as a profession are greatly indebted to Dr. Jack for the many suggestions he has made from time to time for the dignified management and conduct of a dental practice.

Dr. Jack (in closing).— . . . When it is considered that less than 400 assured patients are sufficient for a full practice, and as this number represents the equivalent of 100 families, ten operators satisfy 4,000 people and fifty 20,000 people.

It may be stated in any case if ten men in good and full practice require abundant reward, standing shoulder to shoulder in supporting each other—their course tends to elevate the fees of all their capable associates—even one person who goes forward in a firm and rational manner lifts the prospects of all his fellows.—*Dental Brief.*

BROTHER BILL'S TRAVELS

Brother Bill is a dentist who has, to quote his own words, "passed through every phase of practice from absolute poverty to easy street." He now has a fine practice and enjoys some leisure and travel. He delights in helping his dental friends onward toward financial success. This letter is part of the correspondence with an old classmate he very materially assisted.

MY DEAR BILL: Yours of the 17th, telling how a business friend helped you learn what it was costing you to practise dentistry,* was duly received. Few letters have given me more cause for serious thought.

I had never analyzed my practice on any such basis, but from the facts that I get the fees common to the community and that considerable money passes through my hands, I supposed I was doing well. After a lot of study I went over my annual expenses on your friend's plan. I found them to run as follows:

College expenses	$1,200 00
Value of time in college (I took your estimate)	1,500 00
Value of office equipment, over	900 00
	$3,600 00
Annual operating expenses:	
Rent at $20.00	$240 00
Electricity	18 00
Gas and Heat	40 00
'Phone	18 00
Girl	260 00
Laundry	40 00
Supplies, from last year's bills	375 00
	$991 00

SUMMARY

Annual expense	$991 00
Annual depreciation	100 00
Ten per cent. on investment	360 00
	$1,451 00

* This letter was published in THE DENTAL DIGEST for April.

I didn't include any sum as salary because I wanted to find out what salary I was making.

My business last year amounted to $3,070. When I subtracted my expenses from that I was surprised to find it left me only $1,619 as my salary. That isn't nearly as much as I thought I was making. I didn't think it *could* cost so much to run my office. I always "guessed" that I was making about $2,400 a year. But after my next calculation was made, even the $1,619 looked like a good income.

My practice is largely a family practice among good people. They seldom pay when the work is done, but I send them bills at the end of the month. I have gone carefully over my books, and I find that over $400 worth of last year's work is still unpaid for. In other words, I have earned *in cash* about $100 a month. No wonder I have never saved anything and that the family history has been one of self-denial for the wife and children.

What shall I do? I seem to be in the midst of a mental hurricane. Here at middle age I suddenly find myself to be working for the hire of a first-class clerk and not getting all of that. *I must do something and do it quickly.* Old age and infirmity come on apace. But I must do wisely, I must not wreck what I have so far accomplished.

Help me, Bill. Tell me what to do. You have been through all this and won. I know that if you quit practice now your savings would keep you in comfort. I used to think that only a special gift from Heaven enabled a dentist to make and save money, but the figures in your letter give me a ray of hope. They indicate that such ability comes from the use of common sense. And I have that. Tell me how to use it.

Yours anxiously,

HARRY.

CHICAGO, ILL.

MY DEAR HARRY: Your letter giving the results of an analysis of your practice and your appeal for help has so gripped me that I gladly drop everything to answer it. Let me say right here that your practice is not by any means alone in the state you speak of. I'll bet that when nine dentists out of ten learn to analyze their businesses they'll find themselves in the very same boat. And I want to give you, as your first mental prop, this very comforting fact: I never knew a competent, conscientious dentist to set about remedying these conditions that he did not make a success of it. The happiest thought of my idle hours is that I've helped some of my friends put themselves on the right track financially. And I'm going to help you.

You are right in saying that I've been through your experiences. There isn't a single phase of practice from absolute poverty to "easy street" that I haven't experienced. And in that experience I've had some brain storms that I'll never forget.

Let me make one point very plain. The first revolution must be within yourself, and *you must fight it and win.* Take your tables of costs and add to them the annual salary you feel that you should earn. You'd better make it $2,000, *and lay plans to get it all.* Now there is just one way to earn the $3,451 which it takes to bring your salary up to this point, and that is to advance your fees to the point that will produce $3,451 in not over 2,000 hours actual working time.

That means you must establish a minimum fee rate of $1.70 an hour to come out just even. You'll do better to make your minimum rate $2 per hour, for several reasons. First, you can get that just as easily as you can $1.70. Second, if you earn a little over the $2,000 annually it will not harm you any. Third, two dollars an hour is plenty low enough as the fee for good work in a modern office with your expenses.

When I see patients for whom dental work has stood ten, twenty or thirty years, and rendered immeasurable benefits to the health, vigor, effectiveness and appearance of the wearer, I think the dentist who put it in should have received a dollar a minute. That was about his share. Think of a lady paying $100 for a breastpin and $10 or $20 for the restoration of a tooth. You needn't be afraid of getting more than your share. Your only question need be as to how to get the thin edge of your share.

And now I come to your hardest part. When you make a rate of $2 an hour, *stick to it.* Don't lop off ten minutes here and fifteen minutes there. Don't pass treatments without charging for them. You don't benefit any by an extended, difficult treatment. If John Jones presents with a molar that taxes all your skill and patience to save, let *him* pay; he is the one who benefits by saving that chewer. Don't you pay for it out of your little capital by cutting the time charge. Instead of that, add a little to the bill for good measure and extra hard work.

Probably the thought of such advances in fees will scare you some. When I first planned that, I had an all-gone feeling in my stomach that made my backbone weak. Before my mind there ran a mental moving picture show of all my patients climbing other dentists' stairs while I sat idle and harder up than ever. But it doesn't work out that way at all.

When a dentist has done good work his reputation carries him safely through, and *nothing else helps a good reputation like charging*

good fees. Strange to say, people like it; they think more of him and his work. Perhaps he will lose his cheaper patrons, but he'll get better ones in the end.

Soon after I raised my fees I had a case which was a valuable lesson to me along this line. A patient presented wearing a partial plate on the upper jaw. His upper cuspids were in place and as sound as rocks. So were the first molars. I persuaded him to let me put in a bridge. I didn't name a price at first because I wanted to think over how much I could charge. (You see the Big Idea had changed my notions. I no longer figured to see how cheap I could do the work; I was figuring from the other end, that is, to get my share.) I gave him a fine piece of work and named a price of $2 per hour plus all laboratory costs. That brought the price for the bridge to $100, half as much again as any other dentist in town would have charged for the same piece. When he came to pay he kicked like a two-year-old. I hung to the Big Idea, and presented my side pretty clearly. He paid, but was by no means satisfied. I felt scared and uneasy inside but managed to put up a bold front. And there were a good many hours afterward when I felt like giving part of the money back just to keep him satisfied. He told most of his friends what a high price I charged him. Very frequently that led to an exhibition of the bridge and some discussion. He was honest enough to praise the work.

Shortly after this my practice began to grow in a very pleasing manner. Some mighty fine people, whom I had long wanted, came in. I noticed they never kicked on the prices. Long afterwards I learned that several of them had come because this patient had advertised me so extensively as the highest-priced dentist in the vicinity. Six months later he came back to have his lower teeth fixed and paid a stiff bill with only a good-natured grumble. The moment when he came in the door was one of the happiest of my life. It proved that high prices were a good drawing card.

From that day to this I've been the highest-priced dentist anywhere around. I intend to continue so if I have to make my fees $20 an hour to do it. It brings the very best people in the community as nothing else would.

A good many of my friends, spurred by necessity, have raised fees once, and nearly every one has found it so easy and successful that he has raised them several times. And every one has found such action to be successful.

It makes all the difference in the world how you go about raising fees. The best way I know of is to send a card to all your present or prospective patients something like the following:

JOHN DOE, D.D.S.,

respectfully announces that on May 1st his fees will be advanced.

27 MONROE STREET, April 15, 1904.

Maybe you'll feel pretty nervous, but it won't feaze those who get it. It is the best sort of a notice to the public that you have confidence in yourself and that the public has confidence in you. It's a sort of prosperity notice. It will save you a world of talk and explanation.

I wish I'd done this when I first advanced my fees, but there wasn't any time. The Big Idea of good service at good fees hit me one afternoon and I put it into effect the next morning. And I pretty nearly talked my head off for the next six months. I had to justify each advance to each individual patient. A card like the above would have avoided much of that talk. I use the cards now, and they work like a charm.

Of course you can vary the card to suit yourself, but I want to advise you against making any explanation or excuse on it. These weaken the original strength of the bare statement. I believe it has more effect alone.

Now here's where you need your nerve again. Don't lump prices any more than you are compelled to. When asked for an estimate on doubtful work, say you cannot make an exact estimate but you'll make it as reasonable as you can. Stick to that plan and you'll get full fees for treatments, etc. You'll need to make some explanations as to why such work runs into money, but your patients aren't fools. They care for money, but most of them care more for health.

Above all, wear a look of smiling prosperity. When patients "kick" at fees, explain that you musn't do the work unless you do your best, and that the demands on your time are such that you can't do it for less.

You have another problem; it is to get the money now due. Write those who owe you, calling the account to their attention. Hint that they have forgotten it. Ask prompt payment. And keep at it till you get it. You'll master your problems. You'll win and be prosperous. If I can help you further, write me.

Bill

SOCIETY AND OTHER NOTICES

CALIFORNIA.

The California State Dental Association and the Alumni Association College of Dentistry, University of California, will hold their joint session on July 6, 7 and 8, at the College of Dentistry, San Francisco.—R. E. KEYES, *Secretary.*

CONNECTICUT.

The Dental Commissioners of Connecticut will meet at Hartford, June 24, 25, 26, 1909, to examine applicants for license to practise dentistry.—GILBERT M. GRISWOLD, *Recorder.*

DISTRICT OF COLUMBIA.

The next semi-annual examination of the Board of Dental Examiners of the District of Columbia will be held at the George Washington University, July 1, 2 and 3, 1909. Address, Starr Parsons, M.D., D.D.S., 1309 L St., N. W., Washington, D. C.

Northwestern University Dental School will initiate an annual "Homecoming" of its Alumni in connection with Commencement Week, from June 3rd to June 9th, and the alumni have planned for a Clinic to be given in the school on Tuesday, June 8th.

FLORIDA.

The next annual meeting of the Florida State Board of Dental Examiners will be held in Ocala, Fla., June 14, 1909, at 9 A.M.

ILLINOIS.

The next regular meeting of the Illinois State Board of Dental Examiners for the examination of applicants for a license to practise dentistry in the State of Illinois will be held in Chicago, June 10, 1909, at 9 A.M.—J. G. REED, *Secretary.*

INDIANA.

The next regular meeting of the Indiana State Board of Dental Examiners will be held in the State House at Indianapolis, beginning Monday, June 7, 1909, and continuing four days.—F. R. HENSHAW, *Secretary.*

The Northern Indiana Dental Society will hold its annual meeting at Goshen, September 7th and 8th, 1909. W. O. VALLETTE, *Secretary.*

The fifty-first annual meeting of the Indiana State Dental Association will be held at Indianapolis, June 29-30, and July 1.—OTTO U. KING, *Secretary.*

IOWA.

The next meeting of the Iowa State Board of Dental Examiners for examination will be held at Iowa City, beginning June 7, 1909, at 9.00 A.M.

KANSAS.

The Kansas State Board of Dental Examiners will hold a meeting for the examination of applicants for license to practise dentistry, at Topeka, Kansas, June 15th and 19th, 1909.—F. O. HETRICK, *Secretary.*

KENTUCKY.

The Kentucky State Board of Dental Examiners meets the first Tuesday in June, at 8 A.M., in the Louisville College of Dentistry, for the examination of applicants for certificate.—J. RICHARD WALLACE, D.D.S., *Secretary.*

NEW JERSEY.

The New Jersey State Board of Registration and Examination in Dentistry will hold their semi-annual examination, beginning Tuesday, July 6th, and

continuing through the 7th and 8th, in the Assembly Chamber of the State House at Trenton, N. J.—CHARLES A. MEEKER, D.D.S., *Secretary.*

The New Jersey State Dental Society will hold its annual meeting in the Casino, Asbury Park, N. J., July 21-23, 1909. The Hotel Columbia has been selected as headquarters for the Society.—CHARLES A. MEEKER, *Secretary.*

NORTH CAROLINA.

The thirty-fifth annual meeting of the North Carolina Dental Society will be held at Asheville, N. C., June 23 to 26, 1909.—J. C. WATKINS, *Secretary.*

PENNSYLVANIA.

The Pennsylvania Board of Dental Examiners will conduct examinations simultaneously in Philadelphia and Pittsburg, June 9, 10, 11 and 12, 1909.—DR. NATHAN C. SCHAEFFER, *Secretary.*

The forty-first annual meeting of the Pennsylvania State Dental Society will take place at the Hotel Schevley, Pittsburg, Pa., June 29, 30, July 1, 1909.—LUTHER M. WEAVER, *Recording Secretary.*

SOUTH DAKOTA.

The next meeting of the South Dakota State Board of Dental Examiners will be held at Sioux Falls, South Dakota, July 13, 1909, beginning at 1.30 P.M., and continuing three days.—G. W. COLLINS, *Secretary.*

SUSQUEHANNA.

The annual meeting of the Susquehanna Dental Society will convene at the Oneonta Hotel, Harvey's Lake, May 18th, 19th and 20th. This meeting has always been largely attended, and as Harvey's Lake is a popular place and centrally located, the Society expects to outdo its previous records.—FULLER L. DAVENPORT, *Chairman.*

TEXAS.

The regular meeting of the Texas State Board of Dental Examiners will be held in Waco, Texas, beginning 9 A.M. Monday, June 14, 1909.—BUSH JONES, *Secretary.*

VIRGINIA.

The fortieth annual session of the Virginia State Dental Association will be held at Chamberlin, Fortress Monroe, Va., July 21, 22 and 23, 1909.—W. H. PEARSON, *Corresponding Secretary.*

The twenty-seventh annual meeting of the National Association of Dental Examiners will be held at the Hotel Chamberlain, Old Point Comfort, Va., first session opening at 10 o'clock A.M., Monday, August 2, 1909, and continuing through the 3rd and 4th.—CHARLES A. MEEKER, D.D.S., *Secretary.*

The National Association of Dental Faculties will hold their annual meeting in connection with the National Association of Dental Examiners in the Hotel Chamberlain, Old Point Comfort, Va., August 2, 3 and 4, 1909.

The Board of Governors of the Interstate Dental Fraternity will convene for the annual business meeting of the Order at Old Point Comfort, August 1, 1909.—DR. R. M. SANGER, *Secretary.*

WEST VIRGINIA.

The West Virginia State Board of Dental Examiners will hold their next meeting at Charleston, W. Va., June 9, 10 and 11, 1909.

WISCONSIN.

The next annual meeting of the Wisconsin State Board of Dental Examiners will be held in the Dental Department of the Marquette University, at Milwaukee, Wisconsin, beginning June 21, 1909.—F. A. TATE, *Secretary;* J. J. WRIGHT, *President.*

DENTAL LAW OF CALIFORNIA

An Act to insure the better education of practitioners of dental surgery, and to regulate the practice of dentistry in the State of California, providing penalties for the violation hereof, and to repeal an Act now in force relating to the same and known as "An Act to insure the better education of practitioners of dental surgery, and to regulate the practice of dentistry in the State of California," approved March 12, 1885.

[Approved March 23, 1901; amended and approved March 20, 1903, and March 20, 1905, and March 2, 1907, and April 6, 1909.]

The people of the State of California, represented in Senate and Assembly, do enact as follows:

SECTION 1. It shall be unlawful for any person to engage in the practice of dentistry in the State of California, unless said person shall have obtained a license from a board of dental examiners, duly authorized and appointed under the provisions of this Act to issue licenses; *provided*, that this Act shall not affect the right under the laws of the State of California, of dentists to practice dentistry who have lawful right to practise dentistry at the time of the passage of this Act, and no dentist shall be exempt from paying an annual license tax, as hereinafter provided. [*Amendment of* 1909.]

SEC. 2. A board of dental examiners to consist of seven (7) reputable and ethical practising dentists is hereby created, to be known as the Board of Dental Examiners of California, whose duty it shall be to carry out the purposes and enforce the provisions of this Act. The members of this board shall be appointed by the Governor of California, all of whom shall have been actively and legally engaged in the practice of dentistry in the State of California, for at least five (5) years next preceding the date of their appointment, and none of whom shall be members of the faculty of any dental college or dental department of any medical college in the State of California, or shall have any financial interest in any such college. The said seven (7) shall compose the Board of Dental Examiners of California. The term for which the members of said board shall hold office shall be four (4) years, except that two of the members of the board first to be appointed under this Act shall hold their term of office for the term of one year, two for the term of two years, two for the term of three years, and one for the term of four years, and until their successors are duly appointed and qualified. In case a vacancy occurs in the membership of said board, such vacancy shall be filled by appointment by the Governor, within thirty (30) days after such vacancy occurs.

SEC. 3 deals with the organization of the Board, its meetings, and states that it shall examine all applicants, keep records of licenses granted, and collect fees.

SEC. 4 provides $10 a day compensation for each member and five cents a mile.

SEC. 5 records the address of the members of the Board.

SEC. 6 makes the books of the Board of public record.

SEC. 7. The Governor shall have the power to remove from office at any time any member of the Board for continued neglect of duty required by this Act, or for incompetency, unprofessional or dishonorable conduct.

SEC. 8. Said Board shall examine all applicants for examination, who shall furnish satisfactory evidence of having compiled with the provisions of this Act relating to qualification for examination, together with the payment of the fee provided for in Section 12 of this Act. The examination of applicants shall be sufficiently thorough to test the fitness of the candidate to practise dentistry. It shall include, written in the English language, questions on the following subjects: Anatomy, physiology, chemistry, materia medica, therapeutics, metallurgy, histology, pathology, operative and prosthetic dentistry, oral surgery and orthodontia; the answers to which shall be written in the English language. Said written examination may be supplemented by an oral examination. Demonstrations of the applicant's skill in operative and prosthetic dentistry must also be given. All persons successfully passing such examinations shall be registered as licensed dentists on the Board register, as provided in Section 3, and shall be granted by the Board a license to practise dentistry in the State of California, which license is subject to renewal, as hereinafter provided. In no case shall any applicant be examined or given a license who is not twenty-one years of age. [*Amendment of* 1909.]

SEC. 9. Any member of the Board may inquire of any applicant for examination concerning his character, qualifications or experience, and may take testimony of any one in regard thereto, under oath, which he is hereby empowered to administer.

SEC. 10. Every person now licensed to practise dentistry in this State who has failed to register his license with the clerk of the county wherein his place of business is located, as provided by law, must register the same within sixty days after this law takes effect, and every person who shall hereafter be licensed to practise dentistry in this State shall within six months thereafter register in the office of the clerk where his place of business is located, in a book kept by the clerk for such purpose, and called a register of dentists, his name, age, office address, the date and number of this license to practise dentistry, and the date of such registration, which registration he shall be entitled to make only upon showing to the county clerk his license or a copy thereof certified by the Secretary of the Board over its seal, and making an affidavit stating his name, age, birthplace, the number of his license and the date of its issue; that he is the identical person named in the license; that before receiving the same he complied with all the preliminary requirements of this statute and the rules of the Board of Dental Examiners as to the terms and the amount of study and examination; that no money other than the fees prescribed by this statute and said rules was paid directly or indirectly for such license, and that no fraud, misrepresentation or mistake in a material regard was practised, employed or occurred by any person in order that such license should be conferred. Said person need not personally register before the county clerk but may make the affidavit afore provided before any officer authorized by law to administer oaths, and which affidavit together with the other information and license, or the certified copy thereof as afore provided, shall be forwarded to the said county clerk, who shall act in the manner the same as if the party was personally present. The county clerk shall preserve such affidavit in a bound volume and shall issue to every licentiate duly registering and making such affidavit a certificate of registration in his county, which shall include a transcript of the registration. Such transcript and license may be offered as primary evidence in all courts of the facts therein stated. A copy of such certificate of registration shall be sent by the county clerk to the Secretary of the Board within five (5) days after it is made. The county clerk's fees for taking such registration and affidavit and issuing such certificate of registration shall be one ($1.00) dollar. A practising dentist having registered a lawful authority to practise dentistry in one county of the State, and removing such practice or part thereof to another county, shall show or send by registered mail to the clerk of such other county his certificate of registration. If such certificate clearly shows that the original registration was of an authority issued by the Board of Dental Examiners, or if the certificate of registration itself is indorsed by the Secretary of the Board of Dental Examiners as entitled to registration, the clerk shall thereupon register the applicant in the registers of dentists of the latter county on receipt of a fee of fifty (50) cents, and shall stamp or endorse on such certificate of registration the date and his name preceded by the words "registered also in ——— county," and return the certificate of registration to the applicant. Any lawfully registered person who shall thereafter change his name according to law shall register the new name with a marginal note of the former name with the clerk of the county or counties where he is practising. The clerk shall forthwith notify the Secretary of the Board of such change. Any county clerk who knowingly shall make or suffer to be made upon the register of dentists kept in his office any entry other than that provided for in this Act shall be liable to a penalty of fifty ($50.00) dollars to be recovered by and paid to the said State Board of Dental Examiners in a suit in any court having jurisdiction. Any failure, neglect or refusal on the part of any person holding such license to register the same with the clerk of said county as above directed for a period of six months after the issuance thereof shall ipso facto work a forfeiture of his license, and it shall not be restored except upon the payment to said Board of twenty-five ($25.00) dollars. Any suspension, revocation or reinstatement of a license shall with the date thereof be forthwith noted by the county clerk on the margin of the registration thereof upon receipt of notice from the secretary of the Board. [*Amendment of* 1909.]

[*Section* 11 *repealed March* 20, 1905.]

SEC. 12. No person shall be eligible for examination by the State Board of Dental Examiners who shall not furnish satisfactory evidence of having graduated from a reputable dental college, which must have been indorsed by the Board of Dental Examiners of California, or who shall not furnish to said Board of Examiners a certificate from the State Board of Dental Examiners, or similar body, of some other State in the United States, showing that he or she has been a licensed practitioner of dentistry in that State for at least five (5) years. *Provided*, that every person actually engaged as an apprentice to a regularly licensed dentist in the State of California at the time of the passing of this Act shall be eligible for examination if, within thirty (30) days after the passage of this Act, he shall file with the Secretary of the Board an affidavit stating his name, age, the length of time for which he has been actually apprenticed and with whom; and who, at the time of his application for

examination, shall show to the satisfaction of the Board that he has served an apprenticeship of at least four (4) years and is a graduate from a high school or similar institution of learning in this or some other State of the United States requiring a three (3) years' course of study, *and, provided* that no examination shall be given to an applicant claiming the right to take the same as an apprentice later than June, 1913. [*Amendment of* 1909.]

[*Section* 13 *repealed.*]

SEC. 14. Before any person can practise dentistry in this State he shall obtain a license to do so from the Board of Dental Examiners. Each application shall be accompanied by a fee of twenty-five ($25.00) dollars, which shall in no case be refunded. Such license shall be good until the following first day of May, when it shall expire by limitation. An annual license fee of two ($2.00) dollars shall thereafter be paid annually by every person practising dentistry in this State, and it shall be the duty of said Board to issue to all regularly licensed dentists upon application and the payment of $2.00, if made before the expiration of the applicant's license, a new license which shall entitle said person to practise dentistry in this State for a period of one year, and which license shall expire upon the following first day of May. Said board shall have no authority to issue an annual license to any person who is not a regularly licensed dentist, and who has not paid said license fee of $2.00 on or before the date when his previous license expired. Every person who was a regularly licensed dentist, and who failed to pay said annual license of $2.00 before the expiration of his license, shall be considered as if no license had ever been issued to him, and before he can again practise dentistry in this State shall make a new application therefor as in the first instance and pay the regular fee of $25.00 therefor, except that he shall not be required to submit to any examination. All renewal fees collected under the provisions of this section shall be used exclusively for the prosecution of violators of this Act and for expenses of collecting said fees. All moneys received under this Act shall be deposited in some reliable bank in the name of the Board, and shall be withdrawn only on the joint check of the President and Secretary of the Board. [*Amendment of* 1909.]

SEC. 15. Any person shall be understood to be practising dentistry within the meaning of this Act who shall display a sign or in any way advertise himself as a dentist, or who shall, for a fee, salary or reward, paid directly or indirectly either to himself or to some other person, perform an operation of any kind upon, or treat diseases or lesions of, the human teeth or jaws, or correct malimposed positions thereof; but nothing in this Act contained shall prohibit bona fide students of dentistry from operating in the clinical departments of the laboratory of a reputable dental college, or an unlicensed person from performing merely mechanical work upon inert matter in a dental laboratory or a licensed physician from practising oral surgery or treating diseases of the mouth. [*Amendment of* 1909.]

[*Sections* 16, 17 *and* 18 *repealed in* 1903.]

SEC. 19. Any person, company or association shall be guilty of a misdemeanor, and upon conviction thereof shall be punishable by imprisonment in the county jail not less than ten (10) days nor more than one (1) year, or by a fine of not less than one hundred ($100.00) dollars nor more than one thousand ($1,000.00), or by both such fine and imprisonment, who (1) shall sell or barter or offer to sell or barter any dental degree or any certificate or transcript, made or purporting to be made, pursuant to the laws regulating the license and registration of dentists; or (2) shall purchase or procure by barter, any such diploma, certificate or transcript, with intent that the same shall be used as evidence of the holder's qualification to practise dentistry, or in fraud of the laws regulating such practice; or (3) shall with fraudulent intent alter in a material regard any such diploma, certificate or transcript; or (4) shall use or attempt to use any such diploma, certificate or transcript, which has been purchased, fraudulently issued, counterfeited or materially altered, either as a license or color of license to practise dentistry, or in order to procure registration as a dentist; (5) or shall practise dentistry under a false or assumed name; or (6) shall assume the degree of "doctor of dental surgery" of "doctor of dental medicine," or shall append the letters "D.D.S." or "D.M.D." to his or her name not having duly conferred upon him or her, by diploma from a recognized dental college or school legally empowered to confer the same, the right to assume said title; or shall assume any title, or append any letters to his or her name, with the intent to represent falsely that he or she has received a dental degree or license; or (7) shall in an affidavit, required of an applicant for examination, license, or registration, under this Act, wilfully make a false statement in a material regard; or (8) shall engage in the practice of dentistry under any title or name without causing to be displayed in a conspicuous manner and in a conspicuous place in her or his office the name of each and every person employed in the practice of dentistry therein, together with the word mechanic after the name of each un-

licensed person employed; or (9) shall within ten days after demand made by the Secretary of the Board fail to furnish to said Board the name and address of all persons practising or assisting in the practice of dentistry in the office of said persons, company or association, at any time within sixty (60) days prior to said notice, together with a sworn statement showing under and by what license or authority said person, company or association, and said employee are or have been practising dentistry, but such affidavit shall not be used as evidence against such person, company or association in any proceeding under this section; or (10) is practising dentistry in the State without a license, or whose license has been revoked or suspended. [*Amendment of* 1909.]

SEC. 20. It is hereby further provided that the conferring of degrees and the bestowing of diplomas by reputable dental colleges of this State, which have been indorsed by the Board of Dental Examiners of California, are not included in the penalties prescribed in Section 19 of the said Act of March 23, 1901, as amended by the Act of March 20, 1903. [*Amendment of* 1909.]

SEC. 21½. Any dentist may have his license revoked or suspended by the Board of Dental Examiners for any of the following causes:

(1) His conviction of a felony or misdemeanor involving moral turpitude, in which case the record of conviction or a certified copy thereof, certified by the clerk of the court, or by the judge in whose court the conviction is had, shall be conclusive evidence.

(2) For unprofessional conduct or for gross ignorance or inefficiency in his profession. Unprofessional conduct shall mean employing persons known as cappers, as steerers, to mean employing persons known as cappers, as steerers, to obtain business; the obtaining of any fee by fraud or misrepresentation; wilfully betraying professional secrets; employing directly or indirectly any student or any suspended or unlicensed dentist to perform operations of any kind, or to treat lesions of the human teeth or jaws, or correct malimposed formations thereof, except as heretofore provided in Section 13; aiding or abetting any unlicensed person to practise dentistry unlawfully; habitual intemperance; gross immorality.

The proceedings to revoke or suspend any license under the first subdivision hereof must be taken by the Board on the receipt of a certified copy of the record of conviction. The proceedings under the second subdivision hereof may be taken upon the information of another. All accusations must be in writing, verified by some party familiar with the facts therein charged, and three copies thereof must be filed with the Secretary of the Board. Upon receiving the accusation the Board shall, if it deem the complaint sufficient, make an order setting the same for hearing, at a specified time and place, and the Secretary shall cause a copy of the order and of the accusation to be served upon the accused at least ten (10) days before the day appointed in the order for said hearing. The accused must appear at the time appointed in the order and answer the charges and make his defense to the same, unless for sufficient cause the Board assign another day for that purpose. If he do not appear the Board may proceed and determine the accusation in his absence. If the accused plead guilty or refuse to answer the charges, or upon the hearing thereof the Board shall find them or any of them true, it may proceed to a judgment revoking his license or suspending it. The Board and the accused may have the benefit of counsel, and the Board shall have power to administer oaths, take the depositions of witnesses in the manner provided by law in civil cases, and to compel them to attend before it in person the same as in civil cases, by subpœna issued over the signature of the Secretary and the seal of the Board and in the name of the people of the State of California. Upon the revocation of any license, the fact shall be noted upon the records of the Board of Dental Examiners and the license shall be marked as cancelled upon the date of its revocation. [*Amendment of* 1909.]

——, Ga., May 19th, 1909.

Editor DENTAL DIGEST:

Have taken the DENTAL DIGEST from the beginning. The part that is pleasing me under your management is the fact—that you are trying to raise the status of dentistry financially. I would not miss those articles on "Practice Building" and "Brother Bill's" letters for anything. Keep that kind of work up. Also like the articles upon plate work. I could write a long letter upon how so many dentists seem to think that they can get new work only by cutting some one's prices. We are afraid to charge what a thing is worth if we think there is a chance that they will consult some one else. Your methods are helping my practice in prices and quantity.

G. H. W.